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THE STOCK MARKET

BY

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MUSEUM of AMERICAN FINANCE

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Stocks
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PREFACE

THE management of money in a manner so as to produce the largest returns without undue risk is a difficult problem but one that is vital from both the individual and the social points of view. There are many fields open to the individual and institution which offer opportunities for a reasonable return on funds invested.

That an enterprise involves risk does not condemn it, neither does that fact condemn as socially undesirable the individual who puts his money into such an enterprise. Fraud and careless or intentional mismanagement are always reprehensible, but enterprises new and old, honestly and carefully organized and managed, are the basis of economic progress. The very stage of our present economic development and the nature of the great variety of industrial and financial institutions which our civilization demands make it impossible to eliminate the element of risk of ownership in our oldest and strongest corporations. Furthermore, the element of risk in new and untried ventures, which are the pioneers in industrial progress, must necessarily be very great. In other words, ownership in a progressive society must involve all degrees of risk both as to the principal sum invested and the earning power to be realized.

The market for stocks is an institution that has been developed to make the ownership of stocks safer and more convenient and to put the business of investment on a higher plane of intelligence and honesty. To accomplish these ends the market has developed many customs and a technique of operation which must be recognized. Furthermore, the market, as an institution, has become a very definite factor in the making of prices and, as such, its effect must be understood.

This volume aims to present an analysis of the opportunities for the use of funds afforded by the ownership of part

interest in corporations as represented by their stocks and to give the essentials of the structure and operation of the market so that the trader and investor can understand its methods and make intelligent use of them.

The selection of particular securities and the time to buy or sell them is always a difficult problem and takes much thought and care. While only a relatively few chapters are devoted specifically to these problems, they have been kept constantly in mind throughout the book and constitute its central theme.

The book is written primarily for the trader and investor who feel the need of careful study and for college and university use in courses in finance. The first part of the book is devoted largely to a discussion of the machinery of the stock market; then follows a group of chapters which describe the methods of operation employed by different types of traders and investors; a third group attempts to give current methods of forecasting both minor and major stock price movements; and the last chapters attempt to present methods of analysis of the values and earning power behind stocks and the best-known systems of rating such values and earning power.

The author acknowledges his indebtedness to a host of individuals and sources of information. The many contacts which one interested in a particular subject consciously and unconsciously makes with men engaged in business and finance, with colleagues and students, and with books, articles, and the financial press, so largely furnish one's information and so mold one's thought that it is impossible properly to acknowledge one's obligations to particular persons for assistance.

The cordial treatment and able assistance which the authorities and members of the New York Stock Exchange have freely given deserve special mention. I am also particularly indebted to the different economic and investment services for permission to reprint charts and use statistical material compiled by them.

I desire to express my obligation to Assistant Professor H. H. Shively, of the College of Commerce and Journalism, Ohio State University, for reading selected chapters of the manuscript in their initial form.

CHARLES AMOS DICE

Columbus, Ohio, October 5, 1926

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THE STOCK MARKET

I

GENERAL CHARACTERISTICS OF THE MARKET FOR STOCKS

Recognition of the new field. The public and the art of investment. Attitudes of the public toward the stock market. The market for stocks.

Our great inventions and modern business organization are rapidly changing the forms which ownership has taken in the past. Everywhere large-scale industry and business are taking the dominant place. Even in agriculture and the personal-service industries large-scale production is gaining a foothold. Moreover, the multiplication of cities and the rising land values make it impossible for large sections of our population to own their own homes.

Large-scale production means that large amounts of capital must be assembled from many sources. To this end the corporate form of organization is well adapted. Through the issue of different types of stocks and bonds, it offers people with funds a means of employment of such funds suited to their temperaments and needs. The corporation borrows money by the issue of bonds. The bondholders are its creditors. But before bonds can have any secure value there must be a basis of property with stable value and reasonably certain earning power. This property must be provided by the owners of the corporation.

In the case of industrials a very large percentage of the property should always be provided by the stockholders. Because of the more stable nature of their business railroads may be financed on a much smaller ratio of stocks to bonds. Their fixed assets, however, are so large that enormous amounts of capital, beyond that contributed by bondholders, must be supplied by stockholders.

It is, therefore, evident that in order that industry and business may be soundly financed, large amounts of stock must be issued and bought by the public.

RECOGNITION OF THE NEW FIELD

That people of relatively small wealth are putting some of their earnings into bonds and stocks is without question. Those of larger means are investing heavily. Since small investments in real estate, in small stores, and in small factories are becoming less and less profitable, stocks and bonds must take their place and must be made more and more attractive to induce people to save and to supply funds for the use of productive enterprises. That this field is becoming a tremendous one is being recognized by large brokerage houses and banks and by stock-issuing corporations; their whole attitude toward the smaller investor has changed in recent years. Brokerage houses are putting in branches in every city; independent brokers everywhere are offering their services; banks are selling stocks as well as bonds. All these institutions are putting out a tremendous mass of advertising on financial matters, both for the purpose of educating the public and for getting business.

Along with the honest broker has come the dishonest vender of questionable securities. The state and business and investment organizations are attempting to rid the community of fraudulent promotion and the crooked vender of securities. Blue sky laws are enacted and securities departments are established by the states; better business bureaus with the cooperation of farm bureaus, chambers of commerce, and other business men's organizations have become a powerful factor in raising investment standards. Banks and legitimate brokers maintain expensive departments where help and advice may be secured by any one, free of charge.

The issuing corporations, on their part, are also catering to the general public, because the public is a source of much

needed funds and because it is felt that a wide ownership of securities is one of the best means to develop a stable population and to counteract radicalism. Likewise, wide ownership of a company's securities is considered of great value as an advertising agency and as a builder of good-will.

The movement toward customer ownership grows out of this feeling. This is especially true in the public utility field. Employee ownership has the same motives behind the scenes. Men who are part owners will take greater interest in their company, will work harder, and will boost for the company. Moreover, unionism will be less radical, and the labor community will tend to be more stable.

The fact that in recent years as soon as a stock sells at a relatively high price there is a split-up of shares two for one, or, perhaps, four for one, is another recognition of the value of the smaller man in the market.

THE PUBLIC AND THE ART OF INVESTMENT

Progress in supplying the best stocks and bonds in convenient denominations has far distanced the advance of the public in the knowledge of the science and art of investment. An hour spent with any banker, broker, trustee, or administrator of estates will yield all the evidence that is needed on this point. We seem to be in an age when the quack readily finds a market for his wares, whether in the field of medicine, law, psychology, religion, economics, or what not. A quack may be well intentioned and still be a quack.

Since the old means of using funds in a small individualistic way are being superseded by a large cooperative use, and since the good of the whole community, as well as of each individual, requires that every one provide some reserve funds, however small, it is imperative that the public inform itself as to the broad movements of the security market, the methods and technique of that market, the essentials of discriminating between good and doubtful securities,

and the difference between investment and speculation.

The enormous amount of new capital supplied from the earnings of the people is indicated by the figures on new capital issues. The *Commercial and Financial Chronicle* studies indicate a total of new securities issued in the United States, or sold here, amounting to over $6,216,000,000 and $5,593,000,000 for the years 1925 and 1924, respectively. Of this amount, $594,286,000 in 1925 and $317,990,000 in 1924 were issued in the form of preferred stocks and $557,756,000 in 1925 and $519,200,000 in 1924, in common stocks.[1]

ATTITUDES OF THE PUBLIC TOWARD THE STOCK MARKET

Three attitudes characterize three corresponding types of people. The first attitude is that of the man who wants to avoid risk as much as possible. He is willing to forgo a large income for one that is small but sure year after year, for a long period of years. Moreover, this type wants to be relieved of all responsibility of management and of watching the security market. If for some reason securities should have to be sold, this group of people desire that they shall get a price equal to that paid, and are willing to forgo all chance of a rise in the market price for the assurance that there will be little or no drop. A steady assured income with certainty of realization of the principal sum invested through a relatively long period of years is the aim of this mental attitude.

To this end a form of security is sought, the position of which in the financial organization of the corporation is such as to eliminate risk as far as possible. Other securities in the financial set-up of the corporation act as guards and take the major part of the risk. Careful study and analysis are employed to ascertain weaknesses. No thought is given the purchase of anything that does not meet the severest tests. This attitude of mind is that of the investor.

The second attitude is that of a group of people who want

[1] No-par stocks are valued at the offering price.

a larger return on their money and are willing to take some considerable degree of risk and more or less responsibility in the management of the enterprise. These people are willing to put their funds into a form of security that is not so well hedged about with safeguards as to render it entirely safe from danger. They want a larger income and, besides, expect to make a profit through the appreciation of the value of the security on the market. They are willing to take the risk of a fall in the price in order to secure the opportunity to make a profit by a rise. This group of people, like the investor group, study carefully the market and the securities offered before buying or selling. Often they exercise much more intelligence and skill than the first group mentioned, but the type of security that gives the larger return and possibility of increasing in price is of such a nature that when all possible facts are analyzed there still remains a large margin of uncertainty. This attitude is a highly constructive attitude. It is sometimes known as the speculative attitude taken in the best sense of the word.

The present writer should prefer to place all the people that come under these two groups in the investor class: the people represented by the first attitude proper on the right wing, and those by the second attitude proper on the left. There is also the center party.

In studying the two attitudes, no hard-and-fast lines can be drawn because the same man, up to a certain point in his investment, may be an out-and-out investor, but beyond this point he is ready to take larger risks for the sake of more ample returns.

The third general attitude of mind is represented by those who buy or sell securities without any careful study of the market or the securities bought or sold. They buy because everybody else is buying or because they have a "hunch" that the stock or bond is about to go up. Their idea is to get into the market and make a quick turnover and large profits. People who take this attitude are the fertile field of operation for the tipster, the rumor monger, or perhaps the

honest tool of crooks higher up. Many people of small means, earned and saved at much sacrifice, are found in this class. They have not the knowledge or ability to investigate for themselves and at the same time feel that their hard struggle to save a small amount of money merits more return than is offered by the banker or by the securities recommended by him. Large numbers of middle-class people, ambitious to rise in the social scale, cannot wait on the slow process of accumulation by the regular methods of production and investment and so have developed an attitude of mind that can be easily influenced by a vision of large profits from small investments. There is also a large class of men and women who trade in stocks for the thrills of it. These are in the same class with the habitual gambler. They usually get what they seek but little else in the long run. The activities of the group of people who represent the third attitude are socially undesirable. The group under discussion is a very large one, and its influence is destructive rather than constructive. Effects inimical to economic stability and to social welfare are its by-products.

A large class, because of lack of experience and time to devote to investigation and because of relatively small means, should not take the risks involved in most stocks and bonds. These people should hold only the very best bonds. Anything else is economically and socially undesirable.

From the position of the highest degree of safety of principal and certainty of income the stairs lead step by step down to stocks and bonds involving large risk because of the undeveloped condition of a new and untried business or industry. These latter bonds and stocks should be held only by people of means who can afford risks and who do a great social service by taking them. Indeed, such people should feel a large responsibility to society in making social progress possible through the development of industries and business, new and untried, but socially desirable.

It is quite unfair to call the risk bearer—however small or however large, if the risk is taken intelligently, all things

considered—a speculator, and at the same time attach to the words "speculator" and "speculation" an antisocial connotation. The term "speculator" might well be reserved, with its present antisocial reference, for those who trade on too narrow margins instead of covering well their credit transactions and who do not carefully analyze and carefully estimate the risk they are taking. This would place the pressure or penalty of public feeling where it belongs and would not bring it to bear on activities that are highly desirable, as is the case so often at present. The people who take the first two attitudes described stabilize the economic organization, but the people who take the third unsettle the market, do themselves no good, and create a false type of social psychology in the community.

THE MARKET FOR STOCKS

The market for stocks centers almost entirely in stock exchanges located in New York and other large cities. In New York City are found the New York Stock Exchange, the New York Curb Market, and the Consolidated Stock Exchange. Boston, Philadelphia, Baltimore, Pittsburgh, Chicago, Cleveland, Cincinnati, St. Louis, Kansas City, Denver, and San Francisco have exchanges doing a business of considerable volume. Besides these stock markets, there are exchanges in many of the smaller cities.

The stocks bought and sold on the exchange outside of New York are for the most part the issues of local corporations. The Pittsburgh exchange deals in coal, oil and glass stocks; the Cleveland exchange in rubber stocks or other local issues; Chicago has its own industries largely represented; and the Boston exchange is noted for its trading in mining and textile shares.

As would be expected, many of the stocks which have a great local interest also have a sectional, if not national, interest and are listed on the New York Stock Exchange. Where this is the case, the prices of the latter exchange dom-

inate those of the smaller exchanges. The same is true of stocks listed on local exchanges and the New York Curb Market.

Besides the organized markets, there is in process in the case of stocks a development similar to the open market for bonds. The bond market has never been centered in exchanges to any degree proportionate to the stock market. Bonds are largely sold over the counter to customers of bond houses, of bond departments of banks, and of brokers and dealers. The business in bank and insurance stocks has for years been for the most part an open-market proposition. Of late years this over-the-counter market is widening its scope to include many public utility, railroad, and industrial stocks. The investment trust stocks are almost entirely sold over the counter.

The telephone and private wire system that has been built up to take care of the bond business lends itself readily to the same kind of trading in stocks. A prospective customer goes to his banker or broker and makes inquiry concerning the purchase of a certain number of shares of a desired stock. The broker may consider the price reasonable and sell his own holdings. If he is not holding the stock, he may know some one who is willing to sell this same stock, and call him by telephone, getting his asked price and, perhaps, stating a bid price. The bid price may be the broker's own or that of the customer, after making allowance for a small profit or charge for services.

If no holder of stock is known, then the broker will call up other brokers in the same city and in other cities. He will also advertise in local newspapers for the stock. Finally some one will be found willing to sell at a price which the customer will pay. The details of transfer are usually handled by the broker.

If the customer should want to sell his shares, rather than buy as in the case above, then the broker attempts to find a buyer by the same methods that he would use to find a seller.

In open-market buying or selling the customer must be

especially careful in selecting his broker because of the lack of supervision of brokers' dealings over the counter. Members of the New York Stock Exchange may not deal over the counter in listed stocks.

Another type of market is the public auction. In New York a technique and custom, as to these sales, have been fairly well established. At 14-16 Vesey Street are located the Exchange salesrooms, where each Wednesday afternoon the regular weekly auction sales take place. There are also special sales at other dates. The auctioneers act as agents to sell the stock. Sellers usually reserve the right to bid at the sale. The auctioneer's charges cover advertising, salesroom fees, and a commission which amounts to about one-fourth of 1% on par value, or 25 cents per share on no-par stock. Below is given a brief announcement of an auction sale as reported in the *Wall Street Journal,* July 1, 1926.

AUCTION SALES
HENRY J. LEAKE, Auctioneer
REGULAR AUCTION SALE
STOCK AND BONDS
By ADRIAN H. MULLER & SON
OFFICE, 55 WILLIAM STREET
WEDNESDAY, JUNE 30, 1926, at 12:30 o'clock, at the
EXCHANGE SALESROOMS
NOS. 14 AND 16 VESEY STREET

FOR ACCOUNT OF ADMINISTRATORS:

660 shs. Individual Drinking Cup Co. common
334 shs. Huron Copper Mining Co. common.
$600 Island Refining Corpn. 7% Bonds, Ctf. of Dep. Oct., 1922, Coupons on,
Administrators' right, title and interest in a judgment, oil lease and development agreement (particulars auctioneer's office).

FOR ACCOUNT OF TRUSTEES:

84 shs. Hans Rees' Sons, Inc., common.

FOR ACCOUNT OF WHOM IT MAY CONCERN:

980 shs. Tao Tea Company pf.
785 shs. Tao Tea Company common.
28 shs. Tao Tea Company pf.
7 shs. Tao Tea Company common.
20 shs. Phoenix Factors Corpn. common.
44 shs. Phoenix Factors Corpn. prefd.
129 shs. Second Avenue Railroad Co.
$1,000 The Hotel Pancoast (Miami) General Mtge. 8% Bond, 1931.
615 shs. Vapor Vacuum Heating Co.

The markets for stocks are an essential part of our economic organization. Just as real estate, farms, small stores,

shops or any other property are constantly changing hands so the representatives of ownership in the larger properties must be constantly shifting from owner to owner. The conditions of living in a price-and-profit system under a scheme of private enterprise and individual responsibility, in the face of changing situations due to the business cycles, inventions, movements of population, and so forth, make an efficient means of the transfer of rights to property one of the necessary and indispensable instrumentalities of the economic organization. The development of these means has gone hand in hand with our industrial progress, and necessarily so. Moreover, these stock-market instrumentalities and machinery have been so interwoven into the whole fabric of business and industry that their proper functioning depends on the market just as the market depends on business and industry. To deny the market a proper and essential place in the economic organization is not to understand it at all. Like any piece of machinery, it must be improved and perfected, but it dare not be dispensed with or made less effective by restrictive legislation.

II

THE KINDS OF SECURITIES OFFERED THE PUBLIC

Capital and capitalization. Stocks and bonds distinguished. Certificates of stock. Authorized and outstanding stock. The relation of par and no-par stock to market value. Fully paid and non-assessable stock. Preferred stocks. Redeemability of preferred stock. Debenture stock. Prior preference stock. Convertible stock. Common stock, Class A, Class B. Guaranteed stock. Bankers' shares. Voting trust certificates. Rights. Dividends.

When economic organization was simple and the tools and machinery employed by business were small, the individual business man could furnish all the capital that he needed out of his own accumulations and his borrowing power based on his own property, character, and ability. But as population increased and as better transportation made possible wider markets, more funds had to be provided to take care of the extensions of plant and of machinery that had to be made to meet the demands upon industry and business. Several men had to pool their funds to secure the increase in capital needed. Such cooperation, under proper restrictions and agreements, constituted a partnership. Again, as population grew greater, markets became more extensive, and larger and more expensive machinery was invented, still more funds had to be assembled for the use of a single operating unit. The partnership type of organization served very well as long as only limited amounts of funds were needed, but presented serious limitations when large amounts of funds had to be collected. Now, many people with varied interests had to be reached. These people would not contribute their funds to an organization which required them to become partners and, as such, to assume full responsibility for the acts of all other partners. Again,

many investors would refuse to put their funds into an organization so constituted that they could not withdraw them at will without great difficulty and expense. Such was the situation if funds were put into a partnership. Moreover, large business units called for indeterminate existence, while the partnership had to undergo reorganization at each addition or withdrawal of a partner.

The invention of the corporate organization was a long step ahead in the progress of the economic organization of society. The corporation is an entity with indeterminate life. Ownership of its assets is represented by stock certificates which have been issued by the corporation to people who have contributed funds or services as part owners in the corporation. The principle of limited liability applies to the stock of all corporations. The stockholder's financial responsibility to his company is strictly limited to the face value of the stock which he holds or the amount which he paid for his stock in case it has no par value.

The corporation may borrow money and issue to its creditors its own obligations usually in the form of certificates called bonds. Both bonds and stocks can be transferred without difficulty from holder to holder so that both the stockholder and the bondholder can readily sell their rights in the company to other investors. This is especially true in the case of corporations for whose stocks and bonds a wide and active market has been developed.

Stock certificates may be written for any number of shares so that the man with small means may own stocks. Bonds come in denominations that fit the small as well as the large purse.

As an instrument of production the corporate organization is exceedingly efficient. The main features of the organization are relatively simple. The stockholders elect a board of directors and delegate to them all questions of management except such general matters as increases or decreases of authorized capital stock or bonds, mergers, and liquidation. The directors elect the president, vice-presidents, and

other officers of the company, who carry out in actual accomplishment the plans of the directors.

The corporate organization is an efficient productive instrument, has indeterminate life, offers its owners limited liability, and issues bonds and certificates of stock which can be transferred from holder to holder without difficulty. It thus makes a wide appeal to investors.

CAPITAL AND CAPITALIZATION

Every corporation has a certain amount of wealth in the form of lands, buildings, machinery, tools, raw materials, finished goods, patents, franchises, good-will, investments, cash, and so forth, which it uses in the process of the production of goods or services. The object of the corporation and technical processes required to accomplish its purpose determine whether lands, or buildings, or, perhaps, patents, formulas, or good-will, shall constitute a large part of the wealth, or supposed wealth, that is employed by the corporation management in production. These items appear as assets on the corporation's balance sheet, and the sum total of their marketable value, considering the corporation as a going concern, may be called the capital of the corporation. Such material goods as the corporation owns has been contributed by the owners and by the creditors of the corporation. The wealth contributed by the owners is represented by certificates of the shares of stock which the owners hold as evidences of their ownership. The total number of shares owned by the stockholders constitutes the capital stock. The number of shares of stock owned by stockholders multiplied by the par value of the stock gives the total amount of the capital stock of the corporation outstanding.

But the fact that the par value of the capital stock of a corporation amounts to $5,000,000 is no guaranty that the actual land, machinery, and so forth, represented by the capital stock could be sold for any such an amount. Such material goods may never have been worth the par value of

the stock, or, if they have, bad management may have resulted in great depreciation of their value.

When the shares of stock of a corporation have no par value, the capital stock outstanding consists of all the shares of stock in the hands of owners. In some states a minimum selling price for each share is fixed; for example, New York has set the minimum selling price at time of issue at $5.

In many corporations a considerable part of the wealth represented by the assets side of the balance sheet has been contributed by the creditors of the company. Some of the creditors have contributed short-time funds represented by bills and accounts payable, others have contributed relatively long-time funds represented by mortgages, bonds, certificates, and notes. The sum of the par value of the capital stock and the par value of the mortgages, bonds, certificates, and notes may be called the capitalization of the corporation.[1]

It may be said then that the capital of a corporation is the plant, machinery, raw material, goods in process, goodwill, patents, and so forth—the total amount of wealth, tangible and intangible, employed by the corporation as a going concern. All the items on the assets side of the balance sheet, considered apart from their valuation in dollars, are the company's capital. The capital stock of the company is the sum total of par value of the stock outstanding evidenced by stock certificates in the possession of stockholders. The capitalization of a corporation is the sum of the par value of all the capital stock outstanding and the mortgages, bonds, and notes—that is, the relatively long-time debt. In the case of corporations whose stock has no par value, the capital stock consists of the number of shares issued, and the capitalization, of the number of shares issued plus the relatively long-time debts.

Some writers use the term "capital" to mean net worth, that is, the total value of the assets less liabilities.

[1] See also Dewing, A. S., *The Financial Policy of Corporations,* pp. 3-5.

STOCKS AND BONDS DISTINGUISHED

There are numerous differences between stocks and bonds, some of which are as follows:

1. *Ownership* vs. *indebtedness.* Certificates of stock represent ownership in the corporation; bonds represent the long-time debts of the corporation. A stockholder is a part owner of the corporation, a bondholder is a creditor of the corporation. The bondholder has a claim against the corporation for the face value of his bond. The aggregate amount of stock outstanding represents the assets of the corporation after all debts are provided for. A share of stock indicates ownership of only a fraction of the value of the net assets of a company. Ownership carries with it the responsibility of management of the company and also the possibility of making a profit or a loss.

2. *Security of principal and income.* Except in the case of debentures, bonds are based on mortgages or deeds of trust covering valuable property. A bond is a formal document under seal. It is a promise to pay a specified sum of money, usually in units of $1,000 par value, at a future time with a fixed rate of interest. As long as the company is solvent, the bondholder is certain to receive interest at the rate specified in the bond. As soon as the company cannot meet its interest obligation, the bondholders have a right to foreclose the mortgage on which their bonds are based.

Common stocks, on the other hand, have no date of maturity. The proprietors' money remains in the company until its affairs are liquidated. There is no fixed dividend rate promised. A share of stock simply means a share in the net earnings of the company after all charges are provided for. The stockholder takes chances on the fortunes of his company. If the earnings available for the stock are large, he expects and usually gets a high return on his investment. On the other hand, if earnings are small he expects little or nothing unless there is available a large surplus built

up in previous years. The bonds of a company thus always represent a better investment position than the stocks. This does not mean, however, that the common stocks of some companies are not better investments than the best bonds of other companies.

Preferred stocks are in a position midway between common stocks and bonds. They are not based on a mortgage or trust deed as are bonds but are usually given a preferred position over the common stock as to the earnings and assets of the company. The dividend rate is a specified rate, but its payment is contingent on the prosperity of the corporation. Preferred stocks are frequently redeemable at some future date.

3. *Control.* The owners of the corporation control it. They take the major risks of the business and therefore demand the right to elect the directors of the company and to vote on the most fundamental policies of management. Bondholders want an assured income. They do not want to bother with any share in the work of management. They may have retired from active life or they may have their time fully occupied in enterprises of their own. It is only when the management by the stockholders fails to provide ample protection for the bonds that bondholders demand and are usually granted a greater or less degree of authority in management.

4. *Reorganization.* In the reorganization of a company after failure, bonds always fare better than stocks. Preferred stockholders may be compelled to give up their preferred stock and accept common stock, the junior bondholders may have to accept preferred stock for their bonds. The first-mortgage bonds will suffer the least. In case of assessments the common and preferred stockholders will, of course, be called upon for the full amount that they will pay rather than lose the full value of their stock. If this amount is not sufficient, to put the company on an operating basis, the junior bondholders will be called upon.

CERTIFICATES OF STOCK

The total ownership in a corporation is its total amount of stock. The stock is divided into equal units. Each unit is known as a share. It is interchangeable with every other share and carries with it the same rights to income, property, and control that every other share does. Some stockholders own many shares, others few. As evidence of their rights in the corporation, the corporation issues to each of its proprietors one or more certificates of stock. A certificate may evidence one or many shares. The number of shares so evidenced is always written on the face of the certificate.

The certificate certifies that a specified holder is the owner of a certain number of shares of the common stock of the X. Y. Z. Company, such shares transferable on the books thereof on surrender of the certificate properly indorsed. The certificate is signed by the president or a vice-president and one other of the following officers: secretary, assistant secretary, treasurer, or assistant treasurer. The certificates of most large corporations are not valid unless countersigned by a transfer agent and a registrar. The transfer agent is usually a bank or trust company that receives the certificate from the holder, cancels it, and issues a new certificate in the name of a new owner. The registrar is a second bank or trust company that registers the fact of the transfer by the transfer agent.

Small corporations usually designate the secretary or an assistant secretary of the corporation who cancels certificates sent in, transfers the stock to the new name, and issues a new certificate to the new owner. The new certificate must be signed by the proper officers of the company. On the back of the stock certificate will be found the form for the assignment of the stock to a new holder. The assignment of stock will be discussed in a later chapter. Both the practical phases of assignment and the methods of preventing fraudulent issue of stock certificates will be discussed.

AUTHORIZED AND OUTSTANDING STOCK

At the time of organization the promoters may plan for the growth of the business by getting an authorization through the certificate of incorporation of an amount of stock larger than is needed at the time of organization. Suppose the charter authorizes the issue of stock up to 200,000 shares, but the corporation sells only 150,000 shares to stockholders; then 50,000 shares remain authorized but unissued. Such unissued stock is incorrectly called treasury stock by many people. At a later date the remaining 50,000 shares are sold and issued to buyers. The proceeds may be used for expansion. Before an additional amount of stock can be issued and sold, it must be authorized by the stockholders and the charter must be accordingly amended.

By outstanding stock is meant such stock as has been issued and is now held by proprietors other than the corporation itself. A corporation may buy in and hold part of its own stock and by so much reduce its stock outstanding. Again, the amount of outstanding stock may be reduced through the return by some stockholder of a part of his stock to the corporation. Such stock is usually called treasury stock.

THE RELATION OF PAR AND NO-PAR STOCK TO MARKET VALUE

With few exceptions, railroad stocks have a par value of $100. Among industrials an increasing number of corporations issue stock of less than $100 par value. The number of shares without par value added to the stock list of the New York Stock Exchange in 1924 amounted to 19,500,000. That public utilities are also adopting the no-par value stock plan is evidenced by the listing of over 4,600,000 shares of this class of stock in the same year. A share of stock with a par value of $100 simply means that the certificate has a face value of $100. The market value of the same share might be less than $50. The face value of a $10 promissory

note is $10, but if one were to try to sell it the market value might be only 50 cents on the dollar of face value. The same holds true of the par value and market value of a share of stock or a bond.

In the case of a share of stock without par value, the certificate specifies that the shares of stock are without par value and states the number of shares to which it evidences ownership. If there is a par value fixed, the certificate states both the number of shares to which the holder is entitled and the par value of each share. People occasionally imagine that because a share of stock has no par value it is of quite doubtful or uncertain value. This attitude is quite erroneous, for several of the most substantial stocks on the New York Stock Exchange are without par value.

Some 30 states permit the issue of no-par common stock. Probably a third of these states permit the issue of no-par preferred stocks. Such states as have passed laws have done so with the view of protecting the public against watering of stock and other fraudulent practices. The sponsors of these laws emphasize the fact that, after all, the shares of stock represent only the total net assets and earnings of a company and that each share represents but a fraction of the total value of such net assets and net earnings. The attention of the investing public is thus centered on the real value of a share of stock, and no one is deluded by a fictitious value stated on the face of the stock certificate.

The issue of no-par stock has recently become almost a fad. Every new corporation seems to issue no-par stock. Old corporations convert their stock with par value to no-par value. From the point of view of the corporation, there are several important advantages to be gained from this procedure. In the first place, the original stockholders and promoters are relieved from all liability to future assessments when stock is not fully paid; second, when it would be very difficult to get par for its stock the issue of no-par stock enables a company to finance itself at a price which

the market will pay for its stock; third, when it is next to impossible to estimate the value of a business because a mine or a patent or a new process is its basis, the easy way out is to issue shares with no-par value; fourth, in a reorganization, when the values remaining are uncertain, the issue of stock without par value seems the practical thing to do.

The fact that shares of stock are given a par value or are issued without par, means little as to their market value. The assets behind the stock, the future outlook for earnings, the situation in the money market, the stock-market conditions generally, and the number of shares outstanding are the factors that determine the market price.

FULLY PAID AND NON-ASSESSABLE STOCK

If stock is sold by a corporation for less than its par value, it is part paid or "callable" stock, and the owner is liable up to the full par value. When, however, the par value is fully paid, all further liability to the corporation is discharged. In the case of national and state banks and trust companies, double liability attaches to shares of stock. If an investor has 10 shares of the stock of a national bank for which $1,200 was paid at the time of issue, he may be called upon for an additional $1,000, the par value, if the bank fails and there has been great loss in the assets of the bank. Minnesota is the only state that applies this rule of double liability to corporations generally.

Capital stock is usually paid in full. The directors are supposed to know the best interests of their corporation, and most states by statute give the board of directors the right to declare that the property or services received by the corporation in return for the issue of a given number of shares of stock represent their full par value. The organization of the United States Shipbuilding Company offers an illustration of the above method of declaring shares of stock fully paid.[2]

[2] Ripley, W. Z., *Trusts, Pools and Corporations,* 1916, chap. ix.

It often occurs that the condition of a corporation is such that a new issue of stock will not sell at par value, but the wisest method of financing, considering all the circumstances, calls for the issue of additional stock. Now, in order that there may be no doubt as to the stockholders' liability, it has become not unusual to issue the shares of stock for valuable property—for example, a patent, formula, goodwill, or mineral rights, valued at an amount equal to the par value of the stock issued. A part of these shares are then returned to the ownership of the company as a gift. The company now is free to sell such returned shares at any price the market will pay. Stock thus returned and held by the company is known as treasury stock.

Many certificates are printed or stamped "fully paid and non-assessable." This means that the full par value has been provided for at issue and that the directors of the corporation have no right to assess any amount above the par value against the stockholder. Since the most frequent use of assessments comes at the time of reorganization, and since then the stockholder may be glad to pay an assessment in order to maintain the value of his interest in the corporation, the phrase "non-assessable" has much less significance than would appear on the surface.

PREFERRED STOCKS

Stocks are commonly known as common and preferred. The preferred stock has been created to give the investor a security which pays a larger return than a bond and at the same time is safer than the common stock. The preferred stock, unless otherwise provided in the certificate of incorporation, in general, carries with it all the rights of common stock, with the addition that preferred stock, in a large number of states, is to be considered cumulative. A "7% preferred" stock, without further specifications in the charter, means that the stockholder shall receive a 7% dividend annually before the common stock has any rights to partici-

pate, that he has equal voting power with the common stock, and, moreover, that after the common stock has received a 7% dividend the preferred shall participate equally, share for share, in any dividend that shall be declared by the board of directors in addition to the 7% on the preferred and the common stock. Such a preferred stock would have no right to conversion nor redemption and would have the same rights, share for share, with common stock in the assets of the company. Unlike a bond, a preferred stock is not covered by a mortgage or deed of trust. Unless definitely specified, the preferred stock has no preference over the common stock as to the assets of the company. When it is specified that the stock shall be preferred as to both dividends and assets, it is still junior to all bonds.

Cumulative and non-cumulative preferred. Cumulative preferred stock carries the right of receiving all back dividends, in case such dividends have been passed in preceding years. December 31, 1924, 32½% was due on the Missouri Pacific Railroad's preferred stock. Chicago and Great Western was in arrears 35%. The American Hide and Leather Company is in arrears about 100% on its preferred. The American Can Company paid 5% annually 1904 to 1912, inclusive, on its 7% cumulative preferred stock. The company had paid but 2½% in 1903 and nothing before. In 1913 the company paid 31%, including 24% on accumulated dividends. The regular dividend was paid 1915 and 1916, and in 1917, 15.97% was paid, including 8.97% of unpaid dividends. Non-cumulative preferred, like common stock, is not entitled to dividends unless they have been declared. Out of a list of 34 listed preferred railroad stocks chosen without reference to the cumulative feature, 24 were non-cumulative. Most preferred railroad stocks originated in reorganization and had to be accepted without protecting features.

Industrial preferred stocks are usually cumulative. Unless preferred is cumulative, the board of directors can

manipulate the dividend payments so that the preferred stock has little preference over the common stock as to income to the investor. A company earns the dividend on the preferred in a lean year, but the next year earns more than needed for the preferred and the directors pass the preferred dividend the previous year, then there may be ample surplus to pay as large a dividend on the common as on the preferred. It follows that if the directors declare dividends on those years only when the earnings available for dividends have accumulated to an amount sufficient for payment on both the preferred and common stock, the preference feature is practically made of no effect.

Participating and non-participating preferred. Unless special provision is made, the preferred stock receives its fixed rate of dividend followed by the same rate for the common, after which the preferred participates pro rata with the common. Examples of this type of participation are found in the 7% preferred of the Chicago, Milwaukee & St. Paul Railroad; the 5% preferred of the Iowa Central Railroad; the 7% preferred of the Westinghouse Electric and Manufacturing Company.

There may be specified in the charter other plans of participation. In this connection it is conventional to mention the 7% preferred of the Chicago and Northwestern Railway, which receives 7%, followed by 7% to the common. The preferred receives the next 3%, followed by 3% to the common, and thereafter pro rata to both preferred and common. The 4% preferred of the Big Four Railroad receives 4%, followed by 3% to the common, after which the preferred receives 5% and the common 5%, and then both types of stock share pro rata.

With respect to earnings, examples of non-participating stock are the 6% preferred of the American Bank Note Company, the 7% cumulative preferred (new) of the American Brake Shoe and Foundry Company, 7% non-cumulative preferred of the American Car and Foundry Com-

pany, the 7% cumulative preferred of the American Locomotive Company, and the 7% cumulative preferred of the United States Steel Corporation.

A preferred stock may be participating or non-participating in the assets as well as in the earnings. The participating feature applying to the assets grants the stock a right to share in accumulated profits. A non-participating preferred stock in liquidation will be paid at par value, if the assets are ample, but will not share with the common in any accumulation of profits that the company may have built up.

First preferred, second preferred. Preferred stocks may be designated first preferred, second preferred, and so forth, or they may be called preferred Class A, preferred Class B, and so forth. This means that first preferred or preferred A is to have its dividend before second preferred or preferred B can share in the earnings. The directors of the company may pay dividends to first preferred and pay nothing at all to second preferred, but they cannot declare any dividends to second until first preferred has received its full dividend rate as specified in the charter.

A similar preference as to assets may also attach to first preferred stock as against second preferred. The 7% cumulative first preferred of Mack Trucks, Inc., takes preference over the second preferred and the common stocks both as to dividends and assets.

REDEEMABILITY OF PREFERRED STOCK

If so specified in the stock contract, preferred stock may be called in and redeemed at the option of the board of directors at any time or on any dividend date on a fixed number of days' notice, at any time after issue or at any time after a fixed date and before a given date some years later. For example, a given preferred stock may not be callable for redemption before 1930 but may be redeemable at any time at the option of the company or at any dividend date on 60 days' notice thereafter until 1940. In the case of a

redeemable stock it is common to provide a sinking fund into which is paid each year a fixed percentage of net earnings or a fixed amount of dollars, large enough to accumulate a sum sufficient for the redemption of the stock. Redemption usually takes place at a premium—for example, at 110. In some cases the stock may be redeemed in whole or in part at any one time; in other cases all must be redeemed or none.

In Table 1 are given the names of several redeemable stocks and their conditions of redemption.

The market price of a callable preferred stock will not usually go above the redemption price, for no one will pay any more than the redemption price if redemption may take place at any time. A preferred stock of a prosperous company, redeemable or callable at par, may sell at a price much lower than warranted, considering the high price of the common stock. It is, therefore, customary to redeem not at par but at a premium. This allows the price of the preferred

TABLE 1

REDEEMABLE PREFERRED STOCKS

Company	Dividend in Per Cent	Cumulative or Non-cumulative	Conditions of Redemption
Allied Chemical and Dye Corporation	7	Cumulative	At 120 and accrued dividends on 30 days' notice at the option of the corporation.
Baldwin Locomotive Works	7	Cumulative	At 125 and accrued dividends as a whole but not in part.
Endicott Johnson Corporation	7	Cumulative	At 125 and accrued dividends in whole or in part on 90 days' notice.
General Motors Corporation	7	Cumulative	At 125 at discretion of directors.
Standard Oil Company of New Jersey	7	Cumulative	At 115 and accrued dividends as a whole after three years after date of issue.
Union Tank Car Company	7	Cumulative	At 115 and accrued dividends as a whole on any dividend date after June 1, 1925.

stock to go where it should go, relative to the price of the common. If the rate of earnings of the company is high and especially if the preferred is participating in any large way, it is to the advantage of the common stockholders to have the stock called even if at a pretty "stiff" premium.

Preferred stock may be redeemed by an offer of some other class of stock, for example, common stock, instead of cash at a fixed ratio if so stated in the contract. Practically, this amounts to a conversion of preferred to common at the option of the corporation. The Southern Pacific Company in 1909 called its convertible 7% preferred stock, redeemable at any time after July, 1905, and prior to July, 1910, at 115. The holders were given the choice of accepting the redemption price, $115 per share, or of converting their preferred to common or of taking bonds of the company.

The redemption privilege may be used by the common stockholders to shift control. In the Hill-Morgan *vs.* Harriman struggle for the control of the Northern Pacific Railroad, the Harriman group bought up some $42,000,000 preferred and $37,000,000 common stock of a total of $75,000,000 preferred and $80,000,000 common stock outstanding. Since the preferred stock had equal voting power, share for share, with the common, the Harriman people thought they had control of the road. Meanwhile, the Hill group had increased their holdings to some $42,000,000 of common stock. Now, since the preferred stock was redeemable at par by vote of the common stock of which the Hill interests had control, the Harriman interests were frustrated in their plans because the Hill-Morgan interests proceeded to redeem the preferred at par.

Protected preferred stock. The May Department Stores issued in 1910 a protected preferred stock. The dividend is provided for by building up a special reserve fund which is to be used to pay the stipulated dividend in case they are not earned in any year. If in any year the special reserve fund is drawn down it shall be built up again before the com-

mon stock can claim any dividends. When such a special sinking fund is set aside for the preferred stock, both as to dividends and as to assets, the risk element is greatly minimized.

DEBENTURE STOCK

The term "debenture stock" is not in common use in the United States. Because of its infrequent use, no well-defined meaning has developed. Perhaps the best way to indicate the use of the term is to give the characteristics of several well-known stocks of this type. The two outstanding corporations that have issued debenture stock are the General Motors Corporation and E. I. Du Pont de Nemours & Company.

During the depression period which followed the World War, the General Motors Corporation issued a 7% cumulative debenture stock, a 6% cumulative debenture stock, and a 6% cumulative preferred stock. Both issues of the debentures shared *pari passu* with the preferred in any dividends declared up to stipulated rates. In case of liquidation of the affairs of the corporation these three issues shared *pari passu* in its assets ahead of the common stock. The consent of 75% of both issues of the debentures was required before the board of directors might place a lien ahead of the debentures. A default of dividends for six months gave the debenture stocks sole voting power and if in any year the earnings should drop below 9% the debenture stocks were to be given voting power jointly with the common stock. The preferred stock acquired no right to vote.

In 1924 the General Motors Corporation issued 7% cumulative preferred stock which exchanged on a par-for-par basis for the 7% cumulative debenture stock and a share-for-share basis on payment of $10 cash for the 6% preferred and 6% debenture stocks. The new 7% cumulative preferred has preference as to assets and dividends. The 6% preferred and the 6% debenture stocks have not all been

exchanged. They now have second preference as to assets and dividends, each ranking *pari passu* with the other.

E. I. Du Pont de Nemours & Company has authorized 6% cumulative debenture stock to the amount of $160,000,000, of which $150,000,000 is non-voting. Only $10,000,000 has the voting privilege. The two classes of debenture stock are identical in having preference as to assets and dividends over the common stock.

The consent of 75% of both classes of debentures is required before any lien, except for purchase money mortgages, may be placed ahead of the debentures. In case of default of dividends for six months the non-voting shares acquire voting power and with the voting shares assume sole control of the company to the exclusion of the common stock.

From the above examples it is evident that debenture stock is simply a special form of preferred stock. In the Du Pont de Nemours & Company and in the original issues of the General Motors Corporation, regularity of dividends and sole control, when dividends are in danger, are points of emphasis.

However, the 7% cumulative preferred stock of General Motors has now pushed the 6% cumulative debenture stock into second place as to assets and dividends. It may be said, therefore, that no clear-cut usage of the term "debenture stock" has been developed.

PRIOR PREFERENCE STOCK

In England the term "preference stock" is used instead of preferred stock; in America the term is only slowly coming into usage. Here, prior preference usually refers to preferred stock that is put ahead of preferred stock already outstanding at the time of a reorganization. This was true of the prior preference stock of the Pere Marquette Railway Company, the Goodyear Tire and Rubber Company, and the International Agricultural Corporation.

CONVERTIBLE STOCK

The 8% cumulative convertible preferred stock[3] of the Bethlehem Steel Corporation could be exchanged at any time for common stock on surrender of the preferred certificate and payment of $15 per share of the stock surrendered in the exchange. The 8% convertible preferred had preference over Bethlehem Steel's 7% cumulative preferred and was convertible into the 7% stock at one share, par value 100, for $115 of the 7% preferred after January 1, 1923, and prior to April 1 of the same year. During the year 1924 the U. S. Realty and Improvement Company converted 60,000 shares of its 80,814 shares of 7% cumulative preferred stock to common stock paying 8% dividends.

A preferred stock may be convertible to common stock or to another issue of preferred of the same company junior to the convertible issue. The conversion "privilege" may also apply to common stock in case there are several classes, for example, class A may be converted to class B. The conversion privilege does not attach to preferred stocks or to common stocks very frequently in actual practice. The right has been given to bonds much more frequently. The conversion privilege is usually exercised at the option of the owner of the bond or stock. He is given the choice between smaller income with greater safety and larger income with more risk. Redemption, on the other hand, is exercised at the option of the issuing corporation. Conditions differ as to the manner in which the right to convert may be exercised. It may be exercised immediately in some issues of stock; in others, after a certain number of years from the date of issue or after a fixed date and, perhaps, prior to a later fixed date. Convertible stock may be exchanged for another issue share for share, par for par, or in some other designated ratio; for example, $110 par of the convertible for $100 par of the junior issue.

[3] This stock was called for redemption July 1, 1926

COMMON STOCK, CLASS A, CLASS B

Common stock is often thought of as taking the ultimate risk both as to dividends and as to the assets of the company. But this is not always true. The common stock may be divided into two or more classes. Class B stock may have preference over class A as to dividends and, perhaps, assets; or class B, in order to preserve control for a relatively few inside people, may give up its equal rights to dividends with class A in order to have full voting power—class A thus giving up its voting power for preference as to dividends. There may, however, be no preference as to dividends in class B stock. Dodge Brothers, Incorporated, has issued class A and class B common stock, both stocks being on an equal basis as to dividends, but class B having exclusive voting power. Five hundred thousand shares of B control 1,500,000 shares of common A and 850,000 shares of preference stock. The Bethlehem Steel Corporation had common stock outstanding amounting to over $14,800,000 and common class B amounting to about $165,000,000. The latter had no voting power. The American Tobacco Company has outstanding somewhat over $40,200,000 common stock and about $57,400,000 common class B, which has no voting power. The preferred stock and the common stock have equal voting privileges. The R. J. Reynolds Tobacco Company has outstanding $70,000,000 of common stock class B compared to $10,000,000 common stock. The effect of this classification of common stock is a matter of dispute. Only time can tell how the concentration of control will affect investors.

Founders' stock. This term is not very frequently used in American corporate finance. With us, common stock class A or, perhaps, class B quite often takes the place of founders', or management, shares in English finance. The American International Corporation, until 1925 had 10,000 founders' shares. These shares were a preferred stock.

GUARANTEED STOCK

This term refers to the common or preferred stock of a company that has been leased or that has become subsidiary to another company through some form of combination. The guarantor company contracts to pay an amount which will provide a regular stated dividend to the stockholders of the company whose stock is guaranteed. The amount of the guaranty becomes a fixed charge of the guarantor company the same as interest on its funded debt. Guaranteed stocks are found in the case of industrials and rails; in the latter, they usually arise as the result of the lease by a larger railroad of a smaller one. The lessee company, or companies, agree to pay interest charges on funded debt, taxes, and an annual rental in cash equal to an agreed rate on the outstanding common stock.

A large industrial company may lease the property of another industrial and guarantee to pay its tax, fixed charges, and a given rate on its stock the same as in the case of a railroad. Table 2 contains a list of guaranteed stocks.

BANKERS' SHARES

Bankers' shares are certificates of beneficial interest. They are based on collateral and carry no voting power. The collateral which forms the security and provides the earnings out of which dividends are paid on bankers' shares may be that of one company or of various companies. The bankers' shares of the Cities Service Company were a well-known example of such shares based on the common stock of a single company. In 1919 the Cities Service Company deposited 30,000 shares of its stock, par value $100, with the Bankers' Trust Company of New York as trustee. The trustee, in turn, issued to the Cities Service Company 300,000 certificates of beneficial interest, or bankers' shares. The income on the stock held in trust was distributed to the holders of the bankers' shares. This is a method of securing the practi-

TABLE 2

GUARANTEED STOCKS

Issuing Company	Guarantor	Guaranteed Rate of Dividend	Price Nov. 1925 Bid	Asked
Albany & Susquehanna	(Del & Hud) x	*11	205	208
Allegheny & W	(Buff, Roch & Pitts)	6	105	107
Am Tel & Cable	(Western Union)	5	41	43
Atlanta & Charlotte Air Line	(So Ry)	9	177	180
Beech Creek	(N Y Cent) $50	4	39½	40½
Boston & Albany	(N Y Cent)	8¾	162	164
Canadian Southern	(Mich Cent)	†3	57½	58½
Cayuga & Susquehanna	(D L & W)$30	*8	45	47
Cleveland & Pitts Bet	(Penn) $50	4	40½	41½
Cleveland & Pitts	(Penn) $50	7	70	71
Clinchfield leased lines	(A C L & L & N)	5	94	95
Clinchfield leased lines	(A C L & L & N)	3	77	78
Delaware R R	(Penn)	8	39	40½
Detroit, Hills & Southw	(N Y Cent)	4	77	79
Erie & Pittsburgh	(Penn) $50	6.4	63	64
Ft. Wayne & Jackson pf.	(N Y Cent)	5½	105	107
Georgia R R & Bkg	(A C L & L & N)	10	205	207
Gold & Stock Tel	(Western Union)	6	111	113
Illinois Cent Leased Line	(Ill Cent)	†4	76½	78
Inter. Ocean Tel	(West Union)	6	99	102
Joliet & Chicago	(Chic & Alt)	7	126	130
K C, St L & Chic pf.	(Chic & Alton)	6	95	97
Lack R R of N J	(D L & W)	4	80	81½
Little Miami Original	(Penn) $50	8.6	91	93
Louisiana & Mo. R. pf.	(Chic. & Alton)	7	103	108

*Net dividend after normal tax deduction. †Subject to normal tax.

cal advantages of splitting up high-priced $100 par value stock without the difficulties, legal and otherwise, of changing the capital structure of the issuing company.

Though investment trusts have had a long and successful history both in Great Britain and on the Continent, they are a recent development in the United States. Here they take a somewhat different form. The English give the management of their investment trusts large discretionary power. With us this type of business is new and without well-tried standards or well-established traditions of management.

Because of this situation, we are developing a form of investment trust that limits quite narrowly the element of discretion on the part of the management of the securities put into trust. Usually the stocks of the leading corpora-

GUARANTEED STOCKS—*Continued*

Issuing Company	Guarantor	Guaranteed Rate of Dividend	Price Nov. 1925 Bid	Asked
Mahoning Coal pfd	(N Y C) $50	5	50	51
M, St P S & M L'd lines	(MSP&SSM)	4	61½	63
Mobile & Birming R R pfd	(So Ry)	4	72	74
Mobile & Ohio T ctfs	(So Ry)	4	74	76
Morris & Essex	(D L & W) $50	7¾	79¼	80¼
N Y Lack & West	(D L & W)	5	102	104
N Y Harlem com & pfd	(N Y C) $50	10	155	160
New London Northern	(Cent Vermont)	9	126	130
Northern Central	(Penn) $50	8	80	81½
North R R of N J	(Erie R R)	4	63	66
Northwestern Tel	(West Union)	*6	42	44
Old Colony R R	(N Y, N H & H)	7	111	113
Oswego & Syracuse	(D L & W) $50	9	88	89½
Paterson & Hud River	(Erie) $50	*7	59	61
Peoria & Bureau Val R R	(CRI&P Ry)	*7	116	118
P B & L E com	(B & L E & U S S) $50	3	30	31
P B & L E pfd	(B & L E & U S S) $50	6	59	61
Pitts, Ft Wayne & Chic com	(Penn)	7	135	138
Pitts, Ft Wayne & Chic pfd	(Penn)	7	143	145
Rensselaer & Saratoga	(Del & Hud)	*7	122	124
Southern & Atl Tel	(West Union)	5	21	22
St Louis Br Co 1st pf	(Ter R R St. L)	6	112½	114
St Louis Br Co 2nd pf	(Ter R R St L)	3	55	57
Tunnel R R of St L	(Ter R R St L)	6	113	114½
Utica, Chen & So Ry	(D L & W)	6	118	120
United N J R R & Canal	(Penn)	10	203	204½
Valley R R	(D L & W)	5	100	102
Warren R R	(D L & W) $50	7	69	70½

*Net dividend after normal tax deduction. †Subject to normal tax

tions in one industry are bought and put in trust with some well-known trust company, which issues bankers' shares against the stocks held in trust. These shares are non-voting. One such company issues its shares of stock in units of 1,000 shares based on 115 shares of stock (par value $10,000) of the leading railroads as follows: 10 shares of Atchison, 7 Atlantic Coast Line, 10 Canadian Pacific, 7 Central Railroad of New Jersey, 1 Chesapeake and Ohio, 8 Delaware, Lackawanna and Western, 1 Delaware and Hudson, 6 Illinois Central, 2 Lehigh Valley, 3 Louisville and Nashville, 16 New York Central, 4 Norfolk and Western, 2 Northern Pacific, 14 Pennsylvania, 6 Reading, 8 Southern Pacific, and 10 Union Pacific, making a total of

115 shares of 17 railroads. The stock certificates are issued in bearer form with dividend coupons in 5, 10, 25, 50, and 100 share denominations.

Another investment trust confines itself to the stocks of 10 Edison companies; a third invests exclusively in the stocks of 14 chain-store companies; a fourth strictly limits its holdings to the stocks of the leading Standard Oils; a fifth, however, invests its funds in 6 rails, 6 public utilities, 7 industrials, and 5 oils.

VOTING TRUST CERTIFICATES

One of the methods of concentrating the control of a company is the creation of a voting trust, whereby stockholders deposit their stock with a group of men acting as trustees. The stock is transferred on the books of the company to the trustees so that they become the stockholders and have full right of voting the stock. The trustees issue to the stockholders, in exchange for their stock, certificates of beneficial interest called voting trust certificates. These certificates entitle the holder to receive the dividends paid on the stock and, upon the termination of the voting trust, the receipt of the number of shares of stock of the company held by the trustees in exchange for the certificates. Voting trust certificates are listed on the New York Stock Exchange and other exchanges and are actively traded in. Some voting trust certificates listed on New York Stock Exchange are given in Table 3.

RIGHTS

When for any reason the directors and stockholders decide to increase the amount of capital stock of their company, it is customary to give each stockholder the privilege to subscribe to his portion of the new shares. If there are 200,000 shares outstanding and 50,000 new shares are to be issued, then each group of four old shares will carry the right to subscribe to one new share. The corporation

TABLE 3

SOME VOTING TRUST CERTIFICATES LISTED ON NEW YORK STOCK EXCHANGE

Company	Par
American Water Works & El.	100
Do 1st preferred	100
Do Partic. preferred	100
Austin, Nichols & Co.	No par
Brooklyn Manhattan Rapid Transit	No par
Do Preferred	No par
Coca Cola Company	No par
Columbian Carbon Co.	No par
Davison Chemical	No par
Gold Dust Corporation	No par
Goodyear Tire and Rubber pref.	100
Interborough Rapid Transit	100
Julius Kayser Company	No par
Penn. Seaboard Steel	No par

issues to each stockholder a certificate of privilege to subscribe to his portion of the new shares. The privileges or rights to subscribe are usually issued when the old stock is selling at a premium over par value on the market. The stockholders are allowed to buy at par the shares to which they are entitled. If shares were selling at $110 and if for each four shares held by a stockholder he were privileged to buy one new share at $100, then the holder of 100 shares would be privileged to buy 25 new shares for $2,500. Stock, however, may be selling below par or it may be without par value. In these cases, when additional stock is issued, the stockholders are given the right to buy the shares to which they are entitled at a price lower than the market price of the stock then outstanding. A study of the issue of rights will be taken up in a later chapter.

DIVIDENDS

Dividends are usually quoted as a given per cent of par value or a given number of dollars per share. If a com-

pany the shares of which have a par value of $100 pays 6%, then the stockholder receives $6 per share dividend. If the shares are $50 par value, then he receives $3. Shares without par value are always said to receive a given number of dollars per share. A percentage of a share with no par value means nothing.

Dividends are usually paid quarterly. The summary of stock transactions on the New York Stock Exchange for 1924[4] shows that, out of the hundreds of industrial stocks there quoted, only 22 paid dividends semiannually, and of these, 10 were preferred stocks. Among the railroad stocks the semiannual payment is relatively more frequent.

Dividends may be paid in cash, in property, by scrip, by stock, or by a combination of any two or more of these methods. In case of cash payment, the stockholder whose name is on the books of a company as of a specified date will, on an announced date, receive a check for the amount of the dividend on the number of shares which appear standing in his name on the transfer books of the company. The transfer agent is usually a large bank or trust company. For a fee paid by the corporation this bank or trust company sends out the checks direct to the stockholders. This is the same procedure as is followed in the case of registered bonds.

When the position of a company is such that in the opinion of the board of directors it seems wise to conserve the cash, sometimes scrip is paid instead of cash. This means, in effect, that the corporation sends its promissory note, with interest say for six months or longer, for the amount of the dividend to the stockholder. These notes are negotiable and can be bought and sold or can be held to maturity.

Dividends may also be paid by issuing a share of stock for each specified number of shares held by the stockholders. A 10% stock dividend means that one new share is issued for each ten shares outstanding. The declaration of a stock dividend does not increase the net worth of the

[4] Annual Survey of *The Annalist*.

company. What happens is that ownership rights or shares of stock represent smaller units of the net worth of the company. Practically always, however, the price per share of the old stock rises on the news that a stock dividend is probable. Table 4 gives some of the leading cases of stock dividends declared by companies whose stocks are listed on the New York Stock Exchange during the period immediately following the depression of 1921.

Dividends may also be paid with property of the corporation. Liberty bonds have been paid out in dividend payments in a number of cases within the period since the World War.

Extra dividends are sums paid to stockholders in addition to the regular dividend. The United States Steel Corporation in 1925 paid a 1¼% regular dividend quarterly and an extra dividend of one-half of 1% every 3 months. The American Locomotive Company paid a regular quarterly dividend of $2 on its common stock. For the year 1925 an extra payment of $10 in 4 quarterly instalments was distributed. The fact that the directors of a corporation pay an "extra" dividend means that such a disbursement cannot be considered as permanent. While the investing public considered the extra dividend paid by the United States Steel Corporation as permanent and regular, yet the board of directors did not want to affirm, by their action, that they were certain that such a dividend could be maintained. In the first quarter of 1926 the extra dividend was made permanent.

Extra dividends may be paid in cash, in property, in scrip, or in stock. There are only a few companies that issue stock as a part or the whole of their regular dividend. Stock dividends are commonly extra dividends. The declaration of an extra dividend is generally known as "cutting a melon."

The board of directors has sole power to declare dividends on both the preferred and common stocks. Their dividend policy may be quite conservative or quite liberal.

TABLE 4

STOCK DIVIDENDS, 1922–1924

Date	Corporation	Amount of Dividend
Dec. 29, 1922	American Bank Note Co.	10% in common stock
Dec. 30, 1922	American Radiator Company	50% in common stock
Dec. 30, 1922	American Steel Foundries	18% in common stock
Dec. 20, 1922	Atlantic Refining	900% in common stock
Dec. 10, 1922	Beech-Nut	5% in common stock
Dec. 29, 1922	E. I. du Pont de Nemours & Co.	50% in common stock
Dec. 28, 1922	General Baking	200% in common stock
Oct. 14, 1922	General Electric	5% in special stock
Dec. 5, 1922	Ingersoll Rand	100% in common stock
Dec. 1, 1922	Manhattan Shirt	20% in common stock
Dec. 28, 1922	Nash Motors	3 shares of preferred A stock and 4 shares of common stock for each share of common.
Dec. 30, 1922	National Biscuit	75% in common stock
Dec. 16, 1922	Packard Motor Car	100% in common stock
Dec. 11, 1922	Pan American	25% in class B stock to classes A and B.
Dec. 22, 1922	Standard Milling	60% in common stock
Dec. 20, 1922	Standard Oil of California	100% in common stock
Dec. 30, 1922	Standard Oil of New Jersey	100% in common stock
Dec. 29, 1922	Studebaker Corporation	25% in common stock
Dec. 20, 1922	Union Oil	80% in common stock
Dec. 28, 1922	Union Tank Car	50% in common stock
Dec. 26, 1922	White Eagle Oil	25% in common stock
Dec. 22, 1923	Congoleum Company	300% in common stock
Feb. 15, 1923	Endicott-Johnson Corporation	20% in common stock
Oct. 15, 1923	General Electric	5% in special stock
Mar. 15, 1923	Hupp Motor Car	10% in common stock
Jan. 25, 1923	International Harvester	2% in common stock
Nov. 15, 1923	Intertype Corporation	10% in common stock
Mar. 1, 1923	Kresge (S. S.) Co.	33⅓ in common stock
May 7, 1923	Louisville and Nashville R. R.	62½ in common stock
Feb. 8, 1923	Pan American	20% in class B stock to classes A and B
June 30, 1923	Phillips Petroleum	50% in common stock
June 19, 1923	Postum Cereal	100% in common stock
Apr. 16, 1923	United States Tobacco	20% in common stock
Apr. 30, 1923	Westinghouse Air Brake	35% in common stock
Dec. 31, 1924	American Radiator Company	50% in common stock
Feb. 15, 1924	Continental Can	5% in common stock
June 30, 1924	Corn Products Refining	25% in common stock
Apr. 15, 1924	Hudson Motor Car	10% in common stock
June 16, 1924	National Supply Co.	10% in common stock
June 21, 1924	Otis Elevator	10% in common stock
Sept. 1, 1924	Schulte Retail Stores	25% in common stock
Jan. 2, 1924	Simmons Co.	4% in common stock
June 30, 1924	United Cigar Stores	1¼% in common stock
Sept. 30, 1924	United Cigar Stores	1¼% in common stock
May 21, 1924	Westinghouse Electric and Mfg.	10% common and pref.
Jan. 1, 1925	International Cement	10% in common stock
Jan. 2, 1925	Simmons Co.	8% in common stock

A board of directors like that of the Pennsylvania Railroad Company or the United States Steel Corporation "plow back" into the property large amounts of the earnings, while many others deal liberally with the stockholders. Many times, however, this latter policy does not last long before dividends must be reduced or suspended. If a board of directors decides that the best interests of the company demand that a large surplus should be built up, even if such a policy means sacrifice of dividends, there is no way of compelling the payment of a dividend. If there is no evidence of fraud, the courts will recognize that the business wisdom of the board of directors is superior to their own in the particular case and will not interfere. The one avenue open to surplus earnings is through the election, by the stockholders, of a board of directors willing to distribute a larger share of the earnings of the company. There is, however, a legal limit to the payment of dividends which forbids dividends that impair the capital of the company. The surplus account may be reduced to nothing by payment of dividends so long as no inroads are made on the capital account. English law is not so liberal as American law. There, if the company does not earn sufficient to pay dividends in the current year, dividends may not be paid.

Shares are ex-dividend on the day announced by the board of directors as the day on which the books are closed, and the list of stockholders as of the close of business of that day will receive dividend checks. Thus, if one buys a share of that stock on the day on which the transfer books are closed, the stock sells without any accrued dividend, that is, it sells ex-dividend.

It has been customary, in the past, to close the transfer books for several days so as to give the transfer clerks time to take a list of stockholders with the number of shares each holds on which he is entitled to a dividend. During this period no transfers of stock are made. Recently, however, a growing number of companies never close their transfer books, but take the list of stockholders as of the close of

business of a day designated by the board of directors. The New York Stock Exchange urges companies whose stock is listed there to follow the more recent practice. With modern bookkeeping and accounting systems it is no longer necessary to close the books, thus avoiding the inconvenience of holding stock certificates awaiting transfer.

III

THE CUSTOMERS' ROOM

The quotation board. Classes of stocks. Names of stocks and their classes. The ticker. The ticker tape. Statistical organizations and services.

A YOUNG man accompanies a friend to a brokerage house. It is his first trip. On entering he immediately finds himself in a large room filled with the noise of ringing telephones and clicking telegraph instruments. Small groups of men are watching a large blackboard covering a whole side of the room. A ticker in the center near the blackboard is printing symbols on a narrow tape that is eagerly watched by one or two young men who write quotations upon the board, rushing quickly from one column of figures to another. Occasionally, one of the men watching the board calls a clerk and gives an order which is quickly put into the hands of a telegraph operator. Some men in the room seem quite excited, others are calm; many men are smoking; some are reading the day's telegrams on a bulletin board. The impression left is that of a very busy place. (This is not always true.) Here the young man imagines fortunes are made and lost. He also imagines that the men sitting and standing about are rich and very shrewd. The whole thing is a mystery, a confusion, unintelligible. But after he has made a few visits the confused whole begins to fall into its parts. It is these parts that this chapter attempts to describe.

THE QUOTATION BOARD

Every large brokerage house, if it is a member of the New York Stock Exchange, will have a quotation board. On this board sales of the different stocks traded in on the

floor of the Exchange are marked up, sale after sale, as they come in on the ticker tape. The board is quite a complicated affair, but gives at a glance to the experienced trader a comprehensive view of the day's market. As one examines the board the first intelligent items one sees are the words Railroads, Steels, Motors, Rubbers, Coppers, and so forth. These names are on a horizontal line across the board well toward the top. Under Railroads one recognizes New York Central, Pennsylvania, and others; under Steels, U. S. Steel, Bethlehem, and so forth. At the top of the board are several lines of figures that give previous quotations. The first line at the top usually gives last year's highest quotation of the stock named a few lines below. The second line gives the low quotation of the stock for last year. The third and fourth lines from the top give the high and low price respectively for the particular stock for this year up to date. The next four lines give the open, high, low, and closing prices, in order, of the previous day. The ninth line from the top or the second above the horizontal line giving the classes of stock—Railroads, Steels, Motors, Rubbers, and so forth—gives the date and amount of the last dividend paid on the stock below, and the first line above the classes of stock gives the annual rate of dividends either in percentage or in dollars and cents. Boards vary as to the placing of items, but the data above mentioned are given on all of them.

At a glance, then, the customer interested in any stock on the board can see the high and low prices of last year, the high and low of this year to date, the open, high, low, and closing price yesterday, the dividend date and amount of the last dividend, and the annual rate paid.

In the column below the stock in which the customer has invested or is expecting to invest, the "board boy" is marking up the quotations in order, sale after sale, as they are made on the New York Exchange and transmitted over the wires. Stock prices are quoted in dollars and eighths of dollars.

STOCK QUOTATION BOARD

High 1925			
Low 1925			
High 1926			
Low 1926			
Open			
High			
Low			
Close			
Dividend			
	RAILROADS	STEELS	EQUIPMENT

A point is one dollar. If a stock selling at the opening of the market at 80 advances to 85 at the close of the market for the day it has gained 5 points. The minimum advance or decline in the price of a stock is one-eighth of a point. If a stock is selling at 85 the next step in advance cannot be less than 85⅛ and the next price on the decline cannot be more than 84⅞. A series of sales as marked up on the board will look something as follows:

Baldwin Loco	U. S. Steel	Bethlehem Steel
114	115	42^{4}
113^{7}	116^{1}	44^{3}
6	114^{6}	41^{7}
3		
4	115^{2}	
6		
7		
114^{2}		

The figures beneath Baldwin Locomotive mean that the opening sale was made at 114 per share, then the price de-

clined, the next sale was made at 113⅞, the next at 113¾, next at 113⅜, and so forth, the dash below a quotation meaning that the next sale was at the same price as the previous one.

The three quotations and the short horizontal line beneath in the U. S. Steel column mean that steel has been so active that the whole length of the column has been filled up and erased for further quotations and only the opening, the high, the low, and the last sale prices are preserved. The last sale price is recorded just below the line. The quotations beneath Bethlehem Steel signify the same as those under U. S. Steel except that the last sale was also the low of the day thus far.

The price from sale to sale fluctuates up and down. Sometimes the price varies from sale to sale by the minimum amount and again by a half-point, a point, or many points. The whole market is in a continual flux, with prices ever changing to meet the insistence of demand or the pressure of supply as they vary from moment to moment.

CLASSES OF STOCKS

Let us next take up the classification of stocks as they are found classified for purposes of easy location by the customers. Suppose a customer wants to see what Replogle is doing. Knowing that it is a steel, he looks for Steels on the board and then for Replogle among the steel stocks on the horizontal line next below the Steels. He expects the most important steel companies' stocks to occupy the first columns and the less important to be further on. Some boards have them in alphabetical order. In either case the finding of the stock is much simplified.

The classification of stocks differs on different boards, there being no hard and fast classification used by all brokerage houses. The minuteness of the classification or the number of classes into which the stocks are divided depends much on the size of the board space that is available. A

few classification schemes as found on medium-sized boards follow: Board Number 1.—Rails, Metals, Oils, Motors and Accessories, Miscellaneous, Liberty Bonds. On this board are also found Wheat, Oats, Corn, Pork, Lard, Ribs. Board Number 2.—Railroads, Oils and Gas, Motors and Rubbers, Steels and Equipments, Mining, Foods, and Industrials, Miscellaneous, Liberty Bonds. Board Number 3.—Rails and Tractions, Automobiles and Parts, Copper and Mining, Rubber and Leather, Food and Packing, Shipping and Tobaccos, Oil and Gas, Steel and Coal, Miscellaneous, Liberty Bonds.

NAMES OF STOCKS AND THEIR CLASSES

Our next task is to arrange the many stocks traded on the New York Stock Exchange into proper classes. The particular stocks placed under each head are not necessarily the highest priced of the particular industry, but are chosen with quality, popularity, and activity in the market in mind.

CLASSIFICATION OF LEADING STOCKS LISTED ON THE NEW YORK STOCK EXCHANGE

RAILROADS

New England
- Bangor and Aroostook
- New York, New Haven, and Hartford
- Rutland pfd.

Coalers
- Reading
- Delaware and Hudson
- Lehigh Valley
- Norfolk & Western
- Delaware, Lackawanna, and Western
- Central of New Jersey

Trunk Lines
- New York Central
- Pennsylvania
- Baltimore and Ohio
- Erie
- Nickel Plate

Grangers
- Chicago, Rock Island, and Pacific
- Chicago and Alton
- Chicago, Milwaukee, and St. Paul
- Chicago and Northwestern
- Atchison, Topeka, and Santa Fe

Southern and Southwestern
- Atlantic Coast Line
- Southern Railway
- Seaboard Air Line
- St. Louis and Southwestern
- Kansas City Southern
- Missouri, Kansas & Texas
- Louisville and Nashville

Transcontinental
- Great Northern
- Northern Pacific
- Union Pacific
- Southern Pacific

INDUSTRIALS

Agricultural Machinery
- Advance-Rumely Company
- J. I. Case Threshing Machine Co.
- International Harvester Corp.

Cans

American Can Co.
Continental Can Co.

Chain Stores

Jewel Tea Co.
S. S. Kresge Company
McCrory & Co.
Schulte Retail Stores
United Cigar Stores
United Drug Stores
F. W. Woolworth Co.

Chemicals

Allied Chemical and Dye Corp.
Davison Chemical Co.
U. S. Industrial Alcohol

Coal

Burns Brothers
Consolidation Coal Co.
Pittsburgh Coal Co.
Phila. & Reading Coal & Iron

Department Stores and Mail-Order Houses

Associated Dry Goods Corp.
R. H. Macy & Co.
May Department Stores
Montgomery Ward & Co.
National Cloak & Suit Co.
Sears, Roebuck & Co.

Electric Equipment

Allis-Chalmers
Electric Storage Battery Co.
General Electric Co.
Westinghouse Electric and Manufacturing Co.

Equipments—Railroad

American Brake Shoe & Foundry Co.
American Car and Foundry Co.
American Locomotive Co.
American Steel Foundries
Baldwin Locomotive Works
General Railway Signal
Lima Locomotive Works
New York Air Brake Co.
Pressed Steel Car Co.
Pullman Co.
Union Tank Car Co.
Westinghouse Air Brake Co.

Fertilizers

American Agricultural
Chemical Co.
International Agricultural
Chemical Co.
Virginia-Carolina Chemical Co.

Foods and Packing

Cocoa Cola Co.
Corn Products Refining Co.
Loose-Wiles Biscuit Co.
National Biscuit Co.
Armour & Co.
Beech-Nut Packing Co.
California Packing Corp.
United Fruit
Ward Baking

Mining and Smelting

American Smelting & Refining Co.
Anaconda Copper Mining Co.
Calumet and Hecla Mining Co.
Cerro de Pasco Copper Corp.
Chile Copper Co.
Chino Copper Co.
Great Northern Ore
International Nickel
Kennecott Copper Co.
National Lead Co.
Utah Copper Co.
U. S. Smelting

Motors and Accessories

Chandler Motor Car Co.
General Motors Corporation
Hudson Motor Car Co.
Hupp Motor Car Corporation
Mack Trucks
Nash Motors Co.
Packard Motor Car Co.
Studebaker Corporation
Fisher Body Corporation
Kelsey Wheel Co.
Reynolds Spring Co.
Stewart Warner
Stromberg Carburetor Co.

Oils

Associated Oil Co.
Atlantic Refining Co.
California Petroleum Corporation
Cosden & Co.
Houston Oil Co.
Marland Oil Co.
Pan-American Petroleum
Producers and Refiners Corporation
Pure Oil Co.

Royal Dutch Co.
Standard Oil of California
Standard Oil of New Jersey
Texas Company
Tidewater Oil Company
Union Oil of California

Tractions, Power, Light, and Gas

American Water Works and Electric Co.
Brooklyn Edison Co.
Columbia Gas
Consolidated Gas Co. of N. Y.
Detroit Edison Co.
Interborough Rapid Transit Co.
Laclede Gas Light Co.
Montana Power Co.
North American Co.
Pacific Gas and Electric Co.
Peoples Gas Light & Coke
Philadelphia Co.
Public Service Corporation of N. J.
Standard Gas and Electric Co.
Utah Securities

Rubbers

Ajax Rubber Co.
Fisk Rubber Co.
B. F. Goodrich Co.
Goodyear Tire and Rubber Co., Pfd.
Kelly Springfield Tire Co.
U. S. Rubber Co.

Shipping

American Ship & Commerce
Atlantic Gulf & West Indies Steamship Lines
International Mercantile Marine
Pacific Mail S. S. Co.

Steels

Bethlehem Steel Corporation
Crucible Steel Co.
Gulf States Steel Co.
Inland Steel Co.
Ludlum Steel Co.
Midvale Steel and Ordnance Co.
Replogle Steel Co.
Republic Iron and Steel Co.
Sloss-Sheffield Iron and Steel Co.
United States Steel Corporation
Youngstown Sheet and Tube Co.

Sugars

American Beet Sugar Co.
American Sugar Refining Co.
Cuba Cane Sugar Corporation
Cuban American Sugar Co.
Great Western Sugar Co.
Manati Sugar Co.
Prunta Alegre Sugar Co.

Telephone, Telegraph, and Radio

All-American Cables
Amer. Tel. and Tel. Co.
International Tel. and Tel. Corp.
Mackay Co.
Radio Corporation of America
Western Union Telegraph Co.

Textiles and Clothing

American Woolen Co.
Consolidated Textile
Cluett, Peabody & Co.
A. R. Mallinson & Co.
Julius Kayser & Co.

Tobaccos

American Snuff Co.
American Tobacco Co.
General Cigar Co.
Liggett & Myers Tobacco Co.
Lorillard
R. J. Reynolds Tobacco Co.
Tobacco Products Corporation

Miscellaneous

Adams Express Co.
American Bank Note Co.
American Hide and Leather
American International Corp.
American Radiator Co.
Congoleum Nairn Co.
Du Pont de Nemours
Eastman Kodak Co.
Endicott Johnson Corp.
Famous Players Lasky Corp.
Foundation Co.
Ingersoll, Rand Co.
International Paper Co.
International Shoe Co.
National Enameling and Stamping
Otis Elevator Co.
Underwood Typewriter
Union Bag and Paper Co.
U. S. Cast Iron Pipe and Foundry Co.
U. S. Realty and Improvement
Worthington Pump & Mfg. Co.

THE TICKER

There may be one or more tickers in the customers' room of a brokerage house. A stock ticker is a mechanical device which prints on a tape stock quotations as they are sent over the telegraph wires from the Stock Exchange. As sales are made on the floor of the Stock Exchange, a corps or reporters carry the facts of the sale to the most convenient of four telegraph stations on the floor from which the reports of the number of shares, the price, and the name of the stock are sent to the office of the New York Quotation Company on an upper floor of the Stock Exchange building, where the report is sent out to some 1,900 tickers in the Wall Street District. The New York Quotation Company is owned and controlled by the New York Stock Exchange and supplies the members of the exchange in Lower Manhattan with quotations direct from the floor.[1] One of these tickers is located in the office of the Western Union Telegraph Company where the quotations are transferred to the wires of the telegraph company and transmitted to its tickers throughout the country. Before the telegraph company may rent a ticker to a brokerage house, a permit must be obtained from the New York Stock Exchange. Everything is done to protect the public from fraudulent use of information sent out over the wires.

The development of the ticker service in the United States is without a parallel in England or on the Continent. In England there are no "board rooms." The English have tickers but on these only leading stocks are reported and for these only the bid and asked prices are given at long intervals. The American trader feels that he must get the quotations as soon as possible after the sale is made. Banks that have extended loans based on collateral or that sell securities want to know the market price and trend of security prices at any moment. Banks will lend a larger percentage of credit on collateral if there is a continuous market

[1] Pratt, S. S., *The Work of Wall Street* (third edition), 1921, p. 183.

and constant quotations than they would otherwise. Men buying in one market to sell in another market must work quickly to take advantage of price fluctuations and differences in different markets. The speculator who depends on quick turns must have immediate and accurate information of a rise or fall in the market.

While the mechanical operation of the ticker is very wonderful, yet it has its limitations. In a very active market quotations cannot be put on the ticker as rapidly as sales are made. Besides, because sales are brought to several telegraph desks at the Exchange, on being transmitted to the wires at the central office they often come "bunched," that is, the ticker tape shows a number of sales of a particular stock as if they were consecutive when as a matter of fact the sales of other stocks intervened.

It is said that in the extremely active market of 1919 the ticker was known to be as much as 41 minutes behind at the close at 3 o'clock.[2]

On November 12, 1924, 7 days after the election of President Coolidge, a note in the *Wall Street Journal* ran as follows: "With the tape from 5 to 20 minutes behind the actual trading on the floor, there has been a loud wail, particularly from tape traders, for quotations which will give them some idea of the real state of the market. So far as the tape is concerned, it is hardly useful in such a crisis, and brokerage houses have actually had to resort to the old-fashioned method of calling out quotations and several of them have put a clerk at a separate telephone from the floor whose job is to call out quotations when the tape is behind." On Saturday, January 3, 1925, 1,503,500 shares were sold in the 2-hour session. This has been exceeded but once when 1,603,000 shares were sold, Saturday, August 18, 1906. On the January 3, 1925, date from 11 o'clock until noon, 934,600 shares were sold. The ticker recorded transactions until 12:42½ p.m. The previous record delay was held by November 12, 1919, when the ticker ceased printing quo-

[2] *Ibid.*, p. 184.

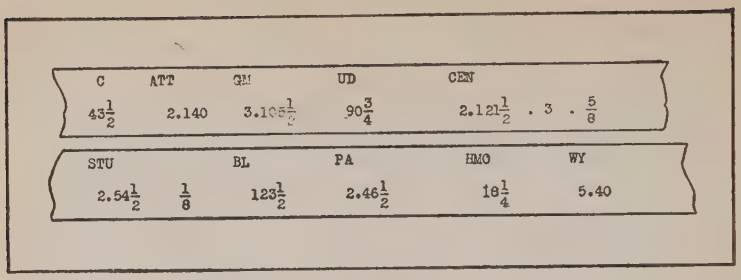


Figure 1: Stock ticker tape.

tations at 3:41 p.m. On January 3, at 10:45 a.m., U. S. Steel was selling at $123 per share, but the ticker tape was reeling off $120⅞; Radio Corporation of America was at $68½ on the floor, but the tape was marking it at $77.[3] In an attempt to avoid delay because of the limits of the capacity of the ticker the Stock Exchange, about 1919, installed a bond ticker. This second ticker system gives the transactions in bonds on the floor, brief notes on events pertaining to the market, and other general information.

THE TICKER TAPE

The "tape" is a narrow ribbon of paper on which the abbreviations of the names of many different stocks, the number of shares sold, and the price per share are printed by the ticker instrument. Above is given a representation of a piece of tape and the abbreviation for some of the leading stocks. The tape shows that 100 shares of Anaconda Copper were sold at $43½ per share; 200 shares American Telephone and Telegraph at $140 per share; 300 shares General Motors at $105½; 100 shares U. S. Industrial Alcohol at $90¾; 200 shares New York Central at $121½ and 300 shares at $121⅝; 200 shares Studebaker at $54½, and 100 shares at $54⅛; 100 shares Baldwin Locomotive at $123½; 200 shares Pennsylvania at $46½; 100 shares

[3] See *Wall Street Journal*, January 5, 1925.

Hupp Motors at $18¼, and 500 shares American Woolen at $40.

ABBREVIATIONS USED FOR LEADING STOCKS

	RAILS
A	Atchison, Topeka & Santa Fe
AX	Atlantic Coast Line
CD	Canadian Pacific
CO	Chesapeake & Ohio
ST	Chicago, Milwaukee & St. Paul
CC	Cleveland, Cincinnati, Chicago & St. Louis
NW	Chicago and Northwestern
RI	Chicago, Rock Island and Pacific
DH	Delaware and Hudson
DL	Delaware, Lackawanna and Western
E	Erie
GQ	Great Northern
IL	Illinois Central
KSU	Kansas City Southern
LV	Lehigh Valley
LN	Louisville and Nashville
MP	Missouri Pacific
CEN	New York Central
H	New York, Chicago & St. Louis
N	Norfolk and Western
NP	Northern Pacific
PQ	Pere Marquette
R	Reading
SB	Seaboard Air Line
SX	Southern Pacific
SZ	Southern Railway
FN	St. Louis and San Francisco
SS	St. Louis and Southwestern
U	Union Pacific

	ACTIVE AND LEADING INDUSTRIALS
ACD	Allied Chemical
AC	American Can
AF	American Car and Foundry
ALO	American Locomotive
AR	American Smelting
S	American Sugar
ATT	American Tel. and Tel.
AT	American Tobacco
WY	American Woolen
C	Anaconda Copper
BL	Baldwin Locomotive
BS	Bethlehem Steel
KO	Coca Cola
G	Consolidated Gas
CFG	Corn Products
COS	Cosden Oil
CS	Cuba Cane
DD	E. I. du Pont
FF	Famous Players
GL	General Electric
GM	General Motors
HMT	Hudson Motors
KN	Kennecott Copper
LW	Loews Inc.
MQ	Mack Truck
MO	Marland Oil
MOW	Montgomery Ward
NA	North American
PP	Pan American Pet.
RA	Radio Corp. of America
SK	Sears Roebuck
SC	Sinclair Oil
SCD	Standard Oil of California
J	Standard Oil of New Jersey
STU	Studebaker
TX	Texas Company
UD	U. S. Industrial Alcohol
CJ	U. S. Cast Iron Pipe
RU	U. S. Rubber
X	U. S. Steel
WX	Westinghouse Electric and Mfg.
ex or ed	Ex. dividend
Pr	Preferred

The type of brokerage house which we have been describing is known as a commission house. No corporation is allowed to be a member of the New York Stock Exchange; consequently, all brokerage houses are partnerships. Com-

mission houses buy and sell stocks and bonds for their customers and make ends meet by charging a commission practically determined by the Stock Exchange for all members. A commission house may have its head office in New York and branch offices and correspondents in many cities throughout the country. On the other hand, headquarters may be in some mid-western city with an office in the Wall Street district that attends to the receiving of orders, and their execution on the floor. Safe-keeping of customers' securities, arrangement of credits, and so forth, may also in part be done at the New York office.

It is one of the branch offices located in a city of the Middle West that we have been describing. This office is connected directly by private wires to New York and also to Chicago. Less directly this office is also connected with the whole system of branches of this firm and other firms. The wire service is so efficient that a customer can hand an order to buy to an order clerk and by the time he finds a friend, borrows tobacco, and "rolls his own," he is informed by the office that his order has been executed at a given price. Returns have been received in Columbus, Ohio, in less than one minute after the customer gave his order.

While only the largest brokerage houses outside of New York have the news ticker service, a ticker which prints the very latest news on ribbons of paper about five inches wide, yet the private wire service carries all the news that is available to all the branches throughout the country almost immediately from New York. A constant stream of news items is flowing over the wires. These items are at once posted on bulletin boards in typewritten form in a conspicuous and convenient place in the board room. The latest tips and rumors, the hard facts, the gossip, the advice and the warnings, the gloom and the optimism of Wall Street and the country come in ceaseless, irrepressible streams. A jump in the price of grain, when the prosperity of the farmer is considered a vital factor in prosperity, arouses the lounging traders in a New York office and in a Columbus office

at about the same time. A sharp break strikes fear into the hearts of traders throughout the country at the same moment. The telegraph and the telephone have largely eliminated space and time.

Not only does the brokerage house provide its wire service in the interests of up-to-the-minute information on all matters pertaining to the market, but it also provides itself with a statistical staff that gathers data on the earnings and movements of particular stocks, of stocks grouped by industries, and of the market as a whole. Corporation reports are analyzed and the financial and business outlook of a great variety of corporations is studied. The results of these analyses and studies are always available to clients of the house free of charge and occasionally one or more of these reports are put into pamphlet or book form for distribution to such people as are interested.

STATISTICAL ORGANIZATIONS AND SERVICES

Realizing the demand and need of information gathered from all possible sources and analyzed by a large, permanent, responsible, disinterested statistical organization, there have been built up such nationally and internationally known statistical organizations as the Babson Statistical Organization, Wellesley Hills, Massachusetts; the Harvard Bureau of Economic Research, Cambridge, Massachusetts; the Brookmire Economic Service, 25 West 45th Street, New York City; the Moody's Investors' Service, 35 Nassau Street, New York City; Poor's Publishing Company, 33 Broadway, New York City; the Standard Statistical Company, 47 West Street, New York City; and the Fitch bond service by the Fitch Publishing Company, 47 Broad Street, New York City. Less widely known services are the service of the American Institute of Finance, Boston, Massachusetts; that of the Richard D. Wyckoff Analytical Staff, Incorporated, 42 Broadway, New York City; *Coming Events* (daily), 46 West Street, New York City, the Graphic

Record Corporation's Service, 29 Broadway, New York City; Investor's and Trader's Service, and others. The cost of these services varies from $100 up.

Every brokerage house subscribes for several of these services and makes them available to its clientele. It may be said that these services are much like men. One may be bullish on the market at the very same time that another is bearish. This is not only true of the minor services but also of the major ones.

It is necessary here to give but a brief description of these services. Any one can get full and up-to-date descriptive materials free of charge by addressing the publishers of these services. They are being rapidly developed, and anything but the general characteristics of each service will soon be past history.

The Babson, Brookmire, and Harvard services have been developed from the point of view of the business cycle. The longer time fluctuations of business is their central interest. The Harvard service does not issue either an investment or speculation letter, but confines itself to the business cycle, as it affects business. The movement of the stock and bond market is touched upon but not in any sense as giving definite advice to buy or sell. The methods and forecasts of the Harvard Economic Service will be taken up in a later chapter.

The Babson Statistical Organization publishes an investment and a speculation service in addition to its services to the fields of industry and business. Advice as to investments and speculation is based on the Babsonchart and always with reference to the long pull. The Babsonchart is a business barometer that makes no pretension to predicting short swings even in business, to say nothing of the stock market. Both the Babson investment and the speculative letters give as definite information as possible as to what bonds and stocks to buy or sell, but always for the long pull.

The Brookmire and the Babson services were the pio-

neers in the field of forecasting business cycles. The Brookmire investment service, however, attempts to do much more than the Babson in the way of forecasting the short time fluctuations of the stock market. Such fluctuations come perhaps from one to two or three times each year. This service comprises a number of bulletins as follows: (1) *Weekly Forecaster;* (2) *Semimonthly Trade Bulletin;* (3) *Monthly Sales and Credit Map;* (4) *Monthly Barometer No. 1* on commodity and industrial stock prices; (5) *Fortnightly Analyst,* giving an analysis of conditions affecting securities and recommendations as to purchase or sale; (6) *Monthly Financial Bulletin;* (7) *Monthly Investment Opportunity Bulletin;* (8) *Monthly Building Bulletin;* (9) *Semimonthly Lumber Bulletin;* (10) *Monthly Barometer No. 2,* on bonds and railroad stocks; (11) *Monthly Security Trend Chart;* and (12) Consultation Service.

The Moody Investors' Service is avowedly for the investors. It makes no attempt to give concrete recommendations on the market for commodities. Moody's *Manuals,* formerly published in connection with Poor's Publishing Company, are mines of information. Moody's *Rating Books,* with their weekly and monthly supplements, give analyses and ratings of any security any American investor will be at all likely to be interested in. There is a weekly review of financial conditions, an index of business conditions, a monthly analysis of business conditions, special letters on important current business and financial topics, special letters giving latest financial reports of important corporations with analysis and discussions of the outlook for the corporation and the industry concerned.

Poor's Three-Thirds Service consists of Poor's *Manuals,* the rating book, weekly investment letters, daily sheets giving earnings, balance sheets, dividend and interest news, reorganizations, new financing, changes in control, changes in security ratings, and so forth. The ratings of the daily sheets are cumulated each month and at the end of six months all ratings revised up to date are published in a

bound volume. Special letters on topics touching the financial and investment conditions in general are issued when occasion demands.

The Standard Statistics Company, Incorporated, provides a very comprehensive service. The company's investment service consists of a Standard Stock service and a Standard Bond service. A unique feature of this service is its daily revised stock card and bond card service. By means of a system of constantly revised cards there is presented in a very convenient and compact form all the important statistics pertaining to business and financial conditions, and the securities of all the leading corporations. Less well-known companies and their securities are treated in separate volumes. There is a weekly cumulative bond book service, a weekly standard bond bulletin, monthly revised bond ratings, a standard daily corporation service giving daily news concerning anything of interest about corporations, a daily dividend service, a semiweekly sheet covering sinking-fund notices, and redemption calls.

The Standard Daily Trade Service is replete with trade and market news, statistics, indexes, graphs, and forecasts. This service also includes special letters on current topics of interest and importance. A statistical bulletin issued quarterly is of special value.

The Fitch Publishing Company furnishes a complete bond service consisting of an annual *Bond Book,* the *Fitch Bond Record* (weekly), giving the latest prices and ratings, the *Fitch Bond Revisions* (cumulative, weekly), giving a cumulative record of sinking-fund operations, receivership proceedings, reorganization data, and all other matters concerning corporation and government activities of interest to the investor. There are also the *Fitch Record of Insurance Company Purchases* (annual), the *Fitch Record of Government Finances* (annual), and the *Fitch Atlas of Railroad Mortgage Maps.*

All these services have special consultation departments where personal attention is given the investment problems

of investors. Analyses will be made of an investor's security holdings, recommendations as to shifting from one security to another are offered, the investment of new funds is planned, and every effort is made to be of service to a client.

The White and Kemble Service is a highly specialized form of aid. It deals only with railroad mortgages. Each map takes up an important railroad, giving by means of color symbols and numbers the different mortgage liens on the different sections of each railroad. These maps are put up in atlas form for office use and in loose-leaf folder form for road use. The essential features of each mortgage are given with the statistical data necessary for an analysis of the financial and operating conditions of the road.

Besides the investment services described above, a large number of speculative services have developed in recent years. These services claim to be able to call the short swings of the market. Among the services which advocate trading by the quick-turn method are the Selden Service, the Graphic Stock Market Service, the Investment and Business Service of the *Magazine of Wall Street*. These services place much importance on the technical position of the market and claim to predict technical movements with a high average of correct results.

The American Institute of Finance of Boston devotes its service, for the most part, to the stock market and is particularly interested, in its weekly and special letters, in giving definite advice as to particular stocks to buy or sell and aims to call the turn of the market about twice each year.

IV

READING THE FINANCIAL PAGE

Purpose in reading. System in reading: governmental matters; production; farm products; mining, smelting, and refining; industrial production; trade and transportation; consumption conditions; prices; corporate conditions; banking conditions; technical position of the market. Summary. Stock quotations. Bond quotations on the New York Stock Exchange. Bonds on other markets. Stock and bond averages. New bond offerings. Dividends declared. Bonds called for redemption. Money market quotations. Foreign exchange rates. Bank and clearing-house reports. The value of the financial page.

The space devoted to strictly financial news varies from perhaps a few columns on local securities and other local financial matters, in the smaller newspapers, to many pages in the great dailies covering the financial news of the world. In the larger towns and cities the newspapers carry brief notes on the financial happenings in the leading corporations, the money situation, interest rates, and quotations of the most active stocks. Liberty bonds are also quoted. In third and fourth class cities the leading dailies will carry from two to three pages of financial news. The dailies of Chicago, Boston, and Philadelphia vie with each other in the publication of the best financial pages and in high standing are second only to two or perhaps three of the greatest of the New York dailies. It is very probable that the growth in the quantity and quality of financial news given to the public the last decade has been exceeded by no other department of the newspaper. It is only since the World War that inland dailies, with few exceptions, have increased the space from a few columns to two pages and more. In quality, comparison is impossible. Never has there been so much interest on the part of the public in financial matters.

It must at once be recognized that to read the financial page as such with understanding requires that general in-

formation of all sorts must be kept in mind. This is supplied not only by the financial page but by the newspaper as a whole.

PURPOSE IN READING

In order to gather from the chaos of facts, opinions, rumors, and gossip any valuable information one must use some systematic plan of reading. What is still more important, one must read with a purpose. That purpose is to relate the information one gains to the changes in prices of securities. As long as one reads about a coal strike or a late frost in the wheat belt, or the increased strength of the radical element in politics simply to keep informed and to appear intelligent in company with other people, one is largely a spectator on the side lines. One knows many interesting things about the game and gets many thrills in seeing it go on, but nevertheless, one is not a part of the action itself and so does not touch the vital things therein. The spectator does not make the decisions, he does not take the responsibility, he does not really experience failure nor does he really get the uplift of victory. When one interprets every item of information as a cause of fluctuation in interest rate, of bonds rising or declining, of the present or future movements of stocks, and when these movements mean gain or loss, as they are rightly or wrongly interpreted, then one is in the vital stream of things and not a mere onlooker.

At first it seems impossible to be always asking "what effect will this or that have on prices?" But soon a habit is created, and almost automatically the mind relates all sorts of information to the security market as cause or effect. The mass of detailed facts and statistics at the command of some bond men and brokers is amazing. Consistent, systematic reading, with cause and effect on the market always in mind, soon gives one the power to remember all manner of relevant data without great effort. Moreover,

the power to interpret the effect of events on the market grows with one's memory and experience.

SYSTEM IN READING

Each reader should mark out for himself a systematic method of reading the daily newspapers and the weekly magazines. The outline of topics here proposed is one of many that might be set down. The order in which the topics appear should not be considered inflexible. For example, politics is put first. It might easily happen that the subject of agricultural prosperity is, at a given time, so vital that it should be put first for the time being. At another time, perhaps, exports and imports stand out. The reader must adapt himself to the outstanding current interest. The general topics here proposed are: (1) governmental matters; (2) production; (3) trade and transportation; (4) consumption; (5) the price level; (6) financial conditions; (7) corporate conditions; and (8) the technical condition of the market.

Governmental matters. Politics may be put as the first topic of financial interest. The front page presents a great variety of items. The reader picks out such items as have to do with political interests and follows them through the paper, asking all the time the effect on business, trade, and prices. Politics are named first, not because they are always the most important or most determining factor, but because they are of perennial interest and are usually "played up" on the front page. The trend of public opinion, the utterances of political leaders, the interference of tax legislation with business, the promotion of public ownership or control of the transportation systems, and the modification of the Federal Reserve System, are fundamental.

New laws, state and national, are vital to prosperity in one way or another. Court decisions may promote one industry but hurt another. Public improvements or their neg-

lect, conservation of public funds or their extravagant use by public officials, all react favorably or unfavorably on the security market.

International politics are becoming of greater moment. The European situation is one of rapid changes. Mexico and South America are sources of great wealth but politically uncertain. The turn of the wheel of politics may mean new prosperity or spell further chaos.

Production. Without production there can be neither trade nor consumption. Efficient production is at the basis of large earnings. On the other hand, overproduction in different lines may be disastrous to large groups of people. The production of the farm, the mine, and the factory must be noted.

Farm products. The buying power of our agricultural population is vital to manufacturing and trade. Since the break in prices in 1920, no one factor has received so much attention as agriculture. Farm crops and farm prices are the specific items of interest. Cotton, wheat, corn, cattle, and hog statistics must be studied. The sugar and tobacco crops are also basic to a number of our largest industries. When all business and industry are closely interdependent, no one great industry can be long either depressed or prosperous without likewise affecting all others. The security market is very sensitive to all changes in basic conditions.

Mining, smelting, and refining. The unprecedented development in the use of electric power and electrical appliances throughout the world within recent years, and the tremendous possibilities that seem just ahead not only center attention on the development of electrical manufacturing concerns but also on the copper producing industries. These have acquired a position of extraordinary economic importance. Copper has become an international necessity. The outlook for future development seems unlimited. In the study of this great industry, the copper resources, the surplus copper on hand, the average daily production, and the

average daily consumption statistics are vital. Exports of copper are of great significance when there is a large surplus on hand. In this connection all political and industrial improvements in England, Germany, France, and Italy are carefully watched because of the copper requirements of these countries. Since silver is produced along with copper by the copper producing companies, a high price for silver may be the source of a substantial part of the company's net earnings.

There are high cost and low cost producers of copper. It costs high cost producers from 10 to 12 cents per pound of copper produced; low cost producers 6 to 8 cents per pound. A fall of one-half cent in the price of copper may change black to red figures on the income statement of high cost producers.

The oil industry has been a source of extraordinary profits. Outside of the Standard Oils and a few independents the business is still highly speculative. There are all grades of stock from the semi-investment group to the merest wild-cat speculation. Many men are thus attracted to the oils. Statistics of daily production of crude oil, surplus oil stored, average daily gasoline production and stock on hand, average daily consumption, the season of the year, and probable consumption figured on the output of cars and trucks are points of interest. The production activities and market operations of the great Standard Oil Companies, the Standard of New Jersey, Standard of New York, Standard of Indiana, Standard of California, and the prices quoted by them are very significant of the oil situation.

Coal production indicates not only the prosperity or adversity of the coal industry, but is also an indicator of conditions in manufacturing generally. The great group of railroads known as the "coalers" are especially affected by changes in the coal situation. Coal strikes seem perennial and always imminent in some section of the mining region. Their effect may be general and needs to be understood.

The Federal Reserve Board publishes indexes of the pro-

duction of anthracite and bituminous coal, copper, zinc, petroleum, cotton, wool, and lumber.

Industrial production. Industrial activity is basic to stock market movements. It is often said that the stock market predicts a rise or a fall in industry and trade. This is denied by some students of industrial conditions who claim that industrial and trade activity and the stock market move together. When business activity begins to pick up, then the stock market activity also starts up, and vice versa. The volume of manufactured products is indicated by the indexes of production computed each month by the Harvard bureau and by the Federal Reserve Board. The Federal Reserve Board publishes these indexes of the volume of industrial production: (1) production of basic industries; (2) factory employment; (3) building contracts awarded; (4) railroad car loadings.

It is difficult to separate the indicators of trade and industry. There are such statistics as bank clearings outside New York City, bank debits to individual accounts outside New York City, and the item "other loans and discounts" in the reports of some 740 member banks published weekly by the Federal Reserve Board that are so tied to both trade and industry that activity in both lines is implied by increases in these series of statistics.

Since pig-iron and steel are basic materials to all industry, they are considered very good if not the best simple barometers of increasing or declining prosperity. Pig-iron and steel production figures are available each week. The report of unfilled orders of steel of the United States Steel Corporation is published the tenth of each month and is considered an excellent indicator of the activity of steel industries generally and therefore also of general business.

Statistics on the number of business failures and the amount of their liabilities are carefully gathered by both Dun's and Bradstreet's and are published each month in the financial pages of the newspapers of the country.

These statistics are classified as to the type of business or industry and are of considerable interest.

The number of bales of cotton consumed and the relative number of spindles in operation indicate the activity in the textile industry. The movement of the center of the textile industry from New England to the southern states is noteworthy.

At no time has the building industry been considered so important as in the period since the war. When every other industry was depressed the automobile and building industries have carried on and have been in many respects the backbone of what prosperity there has been. The most complete reports on building activities are those of the F. W. Dodge Corporation published each month giving the contracts awarded and their value in 36 eastern states. The area covered comprises 85% of the population of the United States. The building contracts are classified as residential, commercial, and industrial.

Inventions and new processes make old machinery and equipment obsolete and give a better product. The De Lavaud process gives the United States Cast Iron and Foundry Company a great competitive advantage; the moving-picture machine is invented and a great industry grows up; the radio manufacturing business multiplies with the perfection of fundamental discoveries. Hand in hand with invention moves competition, that nemesis of the unprogressive producer. The Panama Canal is built and the producer of the West and South comes into direct competition with the producer of the East.

Trade and transportation. Not only must goods be produced but they must also be passed along in a constant stream to the consumer. To this end a great structure of railroad, telegraph, and telephone systems has been built up. There is also the great wholesale and retail market structure. Public opinion, favorable legislation, consolidation, adequate rates and earnings, proper maintenance,

and constructive financing are necessary to the prosperity of the railroads and of business generally. A relatively small number of failures among wholesalers and retailers, good earning figures, large volume of sales, and small inventories show a sound condition in domestic trade. Weekly car loadings and debits to individual accounts or check transactions are indicators of trade activity.

Foreign commerce is looming larger and larger. The business man likes to see a favorable balance of trade. The uncertainty of European competition is a damper on initiative in domestic trade. The president of a great cast-iron pipe company announces French competition, and the stock of his company drops 10 points. Wheat exports increase, and wheat prices go up.

Consumption conditions. If the consumption of goods is not maintained at a high rate, all production must soon slow down. On the other hand, when consumption is increasing rapidly, industrial production will be increased and maintained. Here, then, is another of the fundamentals that affords a center about which to group many facts.

The Federal Reserve Board and each Federal Reserve bank publish an index of wholesale trade and one of retail sales each month. Department-store sales and department-store stocks are reduced to index form and an index for each is published by the Federal Reserve Board and Federal Reserve banks. Car loadings are published each week with comparisons for the same week last year and perhaps for the last five years. Less-than-carload shipments are particularly indicative of the movement of merchandise from the factory to the store. A proper combination of the statistics of car loadings, wholesale and retail trade, department-store sales and department-store stock on hand, will give a pretty fair conception of the movement of goods into the consumer's hands. The volume of savings deposits, increase or decrease in wages, and the statistics of employment indicate buying capacity on the part of the consuming

public. The balance of exports and imports of consumable goods is another item in consumption.

Since the World War we have learned how decisive a large inventory may be in causing breaks in prices. Large surplus stocks of finished goods in the hands of manufacturers and wholesalers can cause great losses. This is also true in the retail trade. Various reports of trade associations besides the Federal Reserve indexes above mentioned deal with this problem. The weekly reviews of trade by Dun's and by Bradstreet's and the reports on trade conditions in the *Commercial and Financial Chronicle* are to the point and are widely copied in daily newspapers.

The publications of the Federal Government are mines of information which no student of the market can afford to pass by. Among these publications the most important for the investor are as follows:

Survey of Current Business by the United States Department of Commerce;
Weather, Crops, and Markets by the United States Department of Agriculture;
Various reports by the United States Bureau of Agricultural Economics;
Monthly Labor Review by the United States Bureau of Labor Statistics;
Bulletins by the United States Bureau of Mines;
Bulletins by the United States Geological Survey;
Monthly Summary of Foreign Commerce by the United States Bureau of Foreign and Domestic Commerce;
Statistics of Railways in the United States (annual) by the Interstate Commerce Commission;
Monthly Bulletins on Railway Operating Expenses and Traffic Statistics by the Interstate Commerce Commission.

Prices. The general price level is measured by a number of carefully constructed indexes. Indexes are made for both wholesale and retail prices. Notable American indexes of wholesale prices are published by Dun's, Bradstreet's, Fisher, the Bureau of Labor, the Federal Reserve Board, and Babson's Statistical Organization. Dun's, Bradstreet's, and Fisher's indexes are issued weekly; the others, monthly.

There are three indexes of English wholesale prices frequently quoted: (1) the Board of Trade's index, (2) Sauerbeck's index, and (3) the Federal Reserve Board's index. The Department of Labor publishes a wholesale price index for Canada. In France, the *Bulletin de la Statistique Générale;* in Italy, Professor Bachi; in Germany, the *Frankfurter Zeitung* and the *Statistisches Reichsamt* publish wholesale index numbers.

Indexes of the retail food prices and of the cost of living are now available for all the leading countries. One index of retail food prices in the United States is published by the Bureau of Labor Statistics and a second by the New York Times *Annalist*. The best cost-of-living index in the United States is published by a special commission on the necessaries of life, but applies to Massachusetts only. In England, the Ministry of Labor; in France, the French General Statistical Office; and in Germany, the Federal Statistical Bureau publish both retail cost of food and cost-of-living indexes. These indexes are all published monthly in the *Federal Reserve Bulletin* and are frequently noted on the financial page of the newspapers. The *Iron Age* publishes weekly composite indexes of the price of pig-iron per ton and of steel per pound. Daily price quotations on all the leading commodities are found regularly. Cotton, wheat, corn, oats, rye, pork, lard, short ribs, sugar, cocoa, coffee, and rubber are now traded on organized exchanges like the Chicago Board of Trade, the New York Cotton Exchange, New York Sugar and Coffee Exchange, the New York Produce Exchange, the New York Cocoa Exchange, and the Rubber Exchange of New York.

Corporate conditions. The country as a whole may be prosperous, while some one industry may be depressed. Again a given industry as a whole may be booming, but some one unit of the industry may be having a hard struggle. The investor studies the corporation reports of a number of units of an industry to get a view of the industry as a whole.

The situation in any one plant is in part arrived at by an analysis of its reports. While corporation reports are not final by any means, they are one of the factors of much weight. It is certain that a conservative investor will not place his money with a corporation of which he cannot get full information. Probably no single institution has done more to persuade industrial corporations to publish adequate reports than the New York Stock Exchange. The primary risk-taker aims to take as little risk as possible and the better he knows the facts the more nearly he accomplishes his aims. If, then, information exists but is not made available by the management to the investor, an attitude so adverse to sound business is displayed that people should withhold their funds and put them with a management that can see the investor's point of view. The United States Steel Corporation has an enviable record in giving the public full and carefully gathered data as to the company's business and condition. Financial papers publish quite full reports of many corporations. Any one interested can usually get reports from the publishers for the asking.

Nearly all the leading industrial corporations publish a quarterly, semiannual, or annual report consisting of a financial statement, income account, and a general statement of the condition of the corporation. The railroads make monthly reports of earnings to the Interstate Commerce Commission and an annual report to the stockholders. All corporations listed on the New York Stock Exchange make at least one full report each year to the Exchange.

Banking conditions. The banking conditions are studied from two points of view: (1) the probable outlook for the supply of credit and its cost in interest rates to the business community, and (2) the probable supply of credit and its cost to the purchaser of securities. The data on which to base a judgment on these two points are furnished, in so far as banks are a factor, by the reports of the banks themselves.

The great central banks of England, France, and Ger-

many make weekly reports on their conditions each Thursday. These reports appear in the Thursday evening and the Friday morning dailies throughout the United States. The Federal Reserve Board makes a report of each Federal Reserve Bank and a consolidated report of the System each Friday morning giving the condition as of the close of business on Wednesday. The Federal Reserve Board also publishes a report of condition of about 740 member banks throughout the country and separate reports for the leading member banks in New York and in Chicago. The associated members of the New York Clearing House make a report of condition each Saturday afternoon. The report gives the actual condition of the leading New York City banks as of the close of business Saturday noon. It also gives the average condition for the week. The items of special importance in the reports of central banks are the ratio of reserves to deposit and note liabilities, the increase or decrease and amount of rediscounts and the increase or decrease and volume of bank note circulation. The items of special note in the report of the members of the New York Clearing House are the surplus reserve, the deposits, and the loans and discounts and investments. The report of the 740 member banks is a good indicator of banking conditions throughout the country. Of special interest are increases or decreases in the items of loans and discounts, due from banks, and deposits. The rediscounts by members are shown in the Federal Reserve Bank reports.

Technical position of the market. The investor is interested in knowing whether the market has been very extensively bought or sold. How do present security prices compare with prices of previous years? Is there great enthusiasm or are all market operators gloomy? What are big financial interests doing? Is there a large short interest? Is there a large supply of stock overhanging the market or is stock scarce? The situation in the market itself regardless of fundamental conditions may be decisive for some weeks.

SUMMARY

The plan of reading here set forth would lead to the systematic reading of the investor under several general topics named: (1) governmental affairs; (2) production; (3) trade and transportation; (4) consumption; (5) prices; (6) the banking situation; (7) corporate conditions; and (8) the technical condition of the market. Other schemes may be suggested, but if the above plan is carried out the reader will soon find a vital interest in the affairs of the world, and the amount of available information that he will soon find at his tongue's end will be greater than he ever imagined.

STOCK QUOTATIONS

Our next task is to explain the presentation of facts on the financial page. The method of quoting stocks and bonds is always a mystery to the uninitiated. Quotations are now well standardized and the method of presentation is found practically identical wherever quotations are published. In Table 5 is given a list of stock quotations taken from the *New York Times,* Saturday, April 18, 1925, giving the market of Friday, April 17.

The statistics at the top of the table mean that the number of shares sold Friday, April 17, was 1,189,320. On Thursday, April 16, 1,421,877 shares were sold. A year ago on the corresponding day the Exchange was closed; two years ago 956,478 shares were sold; "year to date" refers to the sales made January 1 to April 17, inclusive. The sales for the same period for 1924, 1923, 1922, and 1921 are also given. The sales for 1922, 77,085,791, and 1921, 51,527,827, are omitted in the above table for want of space.

The first two columns give the highest and the lowest prices at which a sale was made in the year 1925 to the close of business April 17. The high points were made in January and February; the low in March and April. The amount of the fluctuation is noteworthy. U. S. Cast Iron Pipe and

TABLE 5

STOCK QUOTATIONS, APRIL 18, 1925*

Day's Sales	Thursday	Wednesday	A Year Ago	Two Years Ago
1,189,320	1,421,877	1,183,530	Ex. Closed	956,478

Year to Date	Same Period 1924	Same Period 1923
125,644,368	76,451,506	8,321,692

1925 High	1925 Low	Sales	Stocks and Dividend Rate	First	High	Low	Last	Net Chg.	Closing Bid	Closing Offer
103¼	90	200	Adams Express (6)	92¼	92¼	92¼	92¼	+2¼	91½	93
185½	158½	14,700	American Can (+7)	172	173⅝	172	173¼	+ ½	173¼	173⅜
71¼	47⅝	100	American Sugar Refining	67⅜	67⅞	67⅜	67⅞	.....	67	67½
64¾	38⅞	2,500	American Woolen	40½	40½	39¾	40	− ¼	39⅞	40
96⅜	77	300	American Woolen pf (7)	80½	80½	80	80	−1⅜	79	80
146	107	16,500	Baldwin Locomotive (7)	113	115	112¾	115	+1⅞	114⅞	115
116⅝	109½	200	Baldwin Locomotive pf. (7)	110½	110½	110½	110½	+ ½	109¾	110¾
84¼	71	2,100	Baltimore & Ohio exd. (5)	75½	75⅞	75½	75¾	+ ¼	75⅝	75⅞
103½	100	9,500	Dodge Bros. pf. w.i.	100	100⅛	100	100	.....	100	100⅛
320	227¼	3,400	General Electric (8)	269½	272½	269	269½	− ¼	270	270¾
106¼	74⅝	6,600	Maxwell Motors Class A	105½	106¼	104½	105⅞	+1⅛	105⅜	105¾
87	33¼	77,200	Maxwell Motors Class B	79½	87	78	86½	+8⅝	86½	87
109⅞	104⅜	100	National Supply pf. (7) S. 6 days	105	105	105	105	.....	105¼	110
48⅞	42½	1,800	Pennsylvania Railroad (3)	44¼	44¼	44⅛	44⅛	− ⅛	41⅛	44½
116¾	41¼	11,500	Studebaker Co. (4)	45⅜	45½	45	45⅜	+ ⅛	45⅜	45½
1.00	.21	1,000	Union Oil	⅜	⅜	⅜	⅜	.....	⅜	½
250	152	6,700	U.S. Cast Iron Pipe and Foundry	157	157	152	156	+1	155	156
129⅝	112⅜	12,500	United States Steel (+7)	116½	117½	116⅜	117½	+1⅛	117⅜	117½

* *New York Times.*

Foundry on April 22 got down to 131 per share, a loss of 119. General Electric lost 92¾ but has made a good rally.

The third column shows the activity of the stock. The leaders of the market may usually be picked by a glance down this column. The stocks with large volume are usually the leaders. Of course, volume must be checked against the number of shares of the company listed and, in a bull market, the rise of the price per share before any final judgment can be given. Note Maxwell Motors Class B with a large volume and a gain of 8⅝ points as one of the leaders for the day. The leaders change from time to time. At one time the leading rails as a group lead the market, at another it may be the oils or perhaps the steels, or again the stock of some one company such as United States Steel, the Union Pacific Railroad, Studebaker Corporation, U. S. Cast Iron Pipe and Foundry, or Savage Arms. The leader of six

months ago may not be popular today. Stocks, in turn, have their period of youth and activity and later either pass off the stage or settle down to the careful, conservative, well-husbanded condition of a reasonably stable prosperity.

The fourth column gives the name of the company and its dividend in dollars on an annual basis. Such corporations as American Sugar and American Woolen pay no dividends on their common stock. One wonders how a stock paying no dividend as in the case of U. S. Cast Iron Pipe and Foundry the price could go to $250 or even to $150. The company did very well in 1923, earned over $40 per share in 1924, and early prospects for 1925 were for even larger earnings. Such large earnings must result in liberal dividends. There was also an extraordinary optimistic psychology everywhere in January and February which was a very considerable factor in the high price. It took but a few danger signals to cause a tumultuous retreat.

The abbreviations commonly used in connection with stock quotations and their meanings follow:

com.—common
ctfs.—certificates
ex d. or x d.—ex dividend
ex rts.—ex rights
gtd.—guaranteed
pf.—preferred stock
tem. ctfs.—temporary certificates
tr. ctfs.—trust certificates
tr. rcts.—trust receipts
v. t. c.—voting trust certificates
w. i.—when issued

Dividend rates as given in Table 5 are in dollars. The last quarterly or semiannual payment is reduced to an annual basis. When "+" is placed before the dividend it is partly extra. For example, the 7% dividend of United States Steel is made up of the 5% regular and a 2% extra cash dividend.[1] The 100 shares of National Supply pf. is on a six-day seller's option. The dividend is sometimes given in per cent; for example, the Southern Pacific Railroad pays 6%. If all shares of stock were $100 par value this method of quoting the dividend rate would be quite satisfactory, but since the par of shares of stock varies from $100 per share to no-par

[1] At their first quarterly meeting, 1926, the directors of United States Steel declared a 7% regular dividend.

value the only consistent and simple way to give the dividend is in terms of dollars.

The fifth, sixth, seventh, and eighth columns give the price at which the first sale was made, the highest price for the day, the lowest price for the day, and the price paid on the last sale of the day. In case only one sale was made, the opening, high, low, and closing prices are all the same, as, for example, 100 shares of American Sugar Refining as 67⅜. In the case of 200 shares of Adams Express a single sale of 200 shares was made. The first or opening price, in the case of the most conservative investment stocks, is usually about the same figure as the closing price the previous day. This is not necessarily true, however, especially with widely fluctuating values. Many things can happen from the time the Exchange closes at 3 o'clock in the afternoon until 10 o'clock the next morning. The customer's inquiry as to how the market opened will be answered, "The market opened up." This means that the leading stocks opened higher than the close the previous day. On Monday afternoon, May 19, 1924, the Bonus Bill was passed over President Coolidge's veto. This was taken as adversely affecting stock values, and selling orders were accumulating at brokerage offices in such amounts that the market, on Tuesday, May 20, "opened down" from one to six points.

On the day on which a stock is sold ex-dividend the opening, if nothing of importance has happened since the previous day's close, will be lower than the previous close by the amount of the dividend. Stocks are always quoted "flat." Bonds, except in a few instances, like income bonds or defaulted bonds, sell "and accrued interest." The quotation for a share of stock includes in the price the accrued dividend. If the company pays $1½ quarterly, the price of the stock on the last day before the books are closed includes the $1½. The holder of the stock whose name is recorded in the books of the company at the time of closing the books gets the dividend of $1½. If he had bought the stock the day before he would have been willing to pay $1½ more

than he thought the stock in itself was worth, but on the day the stock sells ex-dividend he will pay only the value of the stock, which now is no longer entitled to the dividend and therefore worth $1½ less. But the quoted price of a bond does not change at interest payments. The buyer of a bond pays the quoted price plus the amount of interest that has accrued from the date of the last interest payment to the date of purchase. The ceaseless up-and-down movements of the price of an active stock can be seen only in a record of every sale. However, the opening, high, low, and closing prices give an indication of what must be going on, especially when the volume is large, as, for example, Maxwell Motors Class B noted above.

The column headed "net change" gives the increase or decrease of the closing price of the day as compared with the closing of the previous day on which there was a sale. Adams Express at 92¼ was 2¼ per share higher than the close of the previous day. American Sugar closed at the same point as the previous day. American Woolen closed ¼ point below the previous day, that is, 40 + ¼ = the previous day's close. Maxwell Motors Class B closed the previous day at 86½ — 8⅝ or 77⅞.

In analyzing the movement of stock prices one asks, "What did the oils do?" The answer is found by singling out the leading oils like the Standards of New Jersey and of California, California Petroleum, Texas Co., Pan American, and a few others to see if they show a plus or minus sign in the net-change column. Next, one notes other oils to see if any of the lesser stocks showed any action. The volume and the net-exchange columns tell the tale. The steels, the motors, the coppers, the sugars, and so forth, are singled out, and their advances or declines are noted. The rails are studied by groups, for example, the coalers, the northwestern, the southern, or the southwestern. Each student of the market will have his own method of analysis of the quotation sheet depending on his interests. The scheme that is adapted to one individual might not suit another at all. The point

to insist on is that each one must have some plan or system of attacking the mass of quotations or fail to get quickly a comprehensive view of the market.

The final columns give the bid or buying price and the offer or selling price quoted by brokers at the close. There may be no actual sale for some time before the close, but brokers are willing to buy Adams Express at 91½ and to sell at 93. The bid price is, of course, lower than the offer price. The bid and asked prices relative to the closing sale indicate the strength of the market at the close. The last sale in American Can was at 173⅛, but the bid price was up ⅛ and the asked price was up ¼ from the last sale. American Can closed strong. Baldwin Locomotive closed at the high for the day, but the bid and asked prices were a shade off the strength displayed at the last sale.

The term "spread" is used to designate the difference between the bid and offered or asked prices. The spread in the New York Stock Exchange cannot be less than ⅛ point. The activity of a stock can generally be judged by the width of the spread between the bid and offer. Activity narrows the spread. Note the wide spread in bid and offer of National Supply preferred. Of two stocks with the same activity, one of wide fluctuations and the other fluctuating scarcely at all, one will expect to find the spread of the former much greater than that of the latter. Again, in a rapidly rising or falling market spreads will be wider than in a steady market. The spread then finally depends on the activity of the stock, the width of its fluctuations, and the steepness of up or down movements of prices of the markets as a whole.

Several years ago the *Wall Street Journal* and several other dailies published the stock sales transaction by transaction. This has now been discontinued. The writer does not know of a single daily newspaper that publishes the market quotations in so great detail. They are published, however, in other mediums.

Each day there are many stocks on the New York Stock

Exchange for which there are bid and asked prices, but no actual sales take place. Such stocks with the bid and asked quotations are given separately and not in the same place with sales.

Full lists of sales and prices on the Consolidated Exchange and on the Curb Market in New York are also quoted. Only leading stocks are given in the quotations of out-of-town markets. The markets usually included are Boston, Chicago, Philadelphia, Baltimore, Pittsburgh, Cleveland, Detroit, Montreal, and San Francisco.

There is growing up a very extensive over-the-counter market for stocks. Under separate heads are given the over-the-counter prices. The classification used varies but in general is as follows: public utility, guaranteed, New York banks, trust and surety companies, insurance companies, investment trusts, German, joint stock land banks, sugar, industrial, Standard Oil, and tobacco stocks.

The total stock sales on the New York Stock Exchange are given with much detail by some of the big dailies. In Table 6 is an illustration taken from the *New York Evening Post* of Tuesday, June 29, 1926.

The New York Stock Exchange quotations are always accompanied by a half-column to over a column of description and some attempt at accounting for the different factors that make up the day's market. The column is headed "Financial Markets" in several of the leading papers. The head-lines always indicate the outstanding movements of the market, so that any one can get a general view of the market at a glance. The first paragraph following the head-lines gives more detail and then follows the general discussion point by point of the factors playing upon the market. Here are several head-lines: (1) "Moderate Advance in Stocks, Money Continues Easy, Franc Rises Sharply"; (2) "Security Prices Surge Forward in Busy Session under Leadership of Motors, with Many New Highs Reached—Rails in Better Demand—French Francs React—Commodities Quiet"; (3) "Rally Comes on Schedule, Stocks Experience Normal Technical

TABLE 6

TOTAL STOCK SALES ON THE EXCHANGE

TOTAL SALES BY MONTHS

	1926	1925	1924	1923
May	23,748,800	36,563,000	13,246,000	23,106,200
April	30,548,800	24,754,300	17,792,100	20,040,200
March	52,160,400	38,845,400	17,716,100	25,855,400
February	35,420,600	32,750,000	26,798,500	22,693,600
January	39,570,400	41,180,300	28,255,500	24,038,500
	1925	1924	1923	1922
December	41,725,200	42,853,700	24,667,200	29,692,400
November	49,113,000	40,464,800	22,707,600	22,881,800
October	53,412,900	18,392,300	16,818,700	25,676,300
September	36,641,900	17,533,800	13,610,200	21,775,100
August	32,797,500	22,142,300	15,982,200	17,850,300
July	33,924,900	25,533,700	12,668,400	15,148,500
June	30,769,800	16,164,900	24,039,300	18,264,600

MINIMUM AND MAXIMUM SALES

Year	Month	Maximum Shares	Month	Minimum Shares
1925	Oct.	53,412,900	Apr.	24,754,300
1924	Dec.	42,853,700	May	13,246,400
1923	Mar.	25,855,400	July	13,668,400
1922	Apr.	30,173,700	Feb.	14,184,700
1921	June	18,264,600	July	9,288,000
1920	Mar.	29,275,500	June	9,114,100
1919	Oct.	36,618,300	Jan.	11,555,400
1918	May	20,941,700	Aug.	6,590,400
1917	May	19,429,400	Aug.	11,545,300
1916	Nov.	34,096,000	July	9,409,500
1915	Oct.	26,214,100	Jan.	4,162,000
1914	Jan.	10,538,500	Dec.	1,898,400
1913	June	9,643,000	Nov.	3,725,800
1912	Apr.	15,855,400	July	7,154,100
1911	Sept.	18,009,000	Apr.	5,266,000
1910	Jan.	24,401,000	Sept.	7,696,000
1909	Aug.	24,637,000	Sept.	12,337,000
1908	Nov.	24,966,000	June	9,652,000
1907	Mar.	32,208,000	Nov.	9,667,000
1906	Jan.	38,512,000	Nov.	19,400,000
1905	Dec.	31,528,000	June	12,576,000
1904	Oct.	32,574,000	June	4,972,000

Recovery from Tuesday's Break—'Frisco Leads Afternoon Recovery. Sales 1,263,500 shares."

BOND QUOTATIONS ON THE NEW YORK STOCK EXCHANGE

The quotation of bonds takes quite a different form from that of stocks. The general classification of bonds for purpose of quotations varies with different financial pages. *The New York Times* and the *New York Evening Post* classify bonds into three classes as follows: (1) United States Government loans, (2) foreign bonds, and (3) domestic bonds.

The *Wall Street Journal* uses the following classification: (1) United States War and Treasury bonds, (2) foreign government and municipal, (3) railroad and miscellaneous bonds.

As has been said before, bonds are regularly quoted "and accrued interest." Only income bonds and bonds in default of interest are quoted "flat." All Liberty Loans and Treasury bonds are quoted in thirty-seconds of a point. Liberty bonds quoted at 102.14 means $102\frac{7}{16}\%$ of par value. All other bonds are quoted in eighths of a point. Again, quotations are all in percentages. The unit on the New York Stock Exchange is $1,000 par value. A bond quoted at 95 then means that $1,000 par value can be bought for $950 with accrued interest added. If the price were to go up one point to 96 then the bond would sell for $960 and accrued interest. Excepting Liberty bonds, each separate sale of a bond issue is listed. If the first sale is $6,000 par value at 95, then a separate item 6 at 95 is quoted. The following sale of the same bond issue will be recorded next. In Table 7 are given illustrations of bond quotations, taken from the *New York Times* April 18, 1925, giving the market of April 17.

TABLE 7

FOREIGN BOND QUOTATIONS*

Argentine 5s 1945	German extl. loan 1924 g. 7s, interim rcts. 1949.	U.S. of Brazil 7½s. 1952.
1.....82	4.....94⅜	3.....104½
s.f. 6s series A	40.....94½	8s, 1941
6.....96½	4.....94⅜	5..... 95¾
2.....96½	5.....94½	1..... 95⅝
28.....96	6.....94⅜	3..... 95½
2 (c).....96½	45.....94½	7..... 95¼
3 (c).....96⅜	102.....94⅜	5..... 95½
9.....96½	6.....94¼	9..... 95½
1st g. 6s Ser. B	14.....94⅜	2..... 95¼
1958 temp.	241.....94¼	Cent. Rys. of Brazil
24.....96	100.....94⅛	Elec. 7s, 1952.
2.....96½		10..... 81⅛
7.....96		etc.
etc.		

*New York Times, April 18, 1925.

Domestic bonds are quoted exactly like foreign bonds. For example, American Telephone & Telegraph Collateral 4s, 1926: 1....97; 22....97⅛; 5....97; and so forth. The bid and asked prices for bonds in which there was no sale during the day are given in a separate place. There are many types of bonds and hence the abbreviations used to represent them are numerous. Below are given those abbreviations commonly found.

adj.—adjustment
asstd.—assented
col. or col. tr.—collateral trust
ctfs. dep.—certificates of deposit
con.—consolidated
conv.—convertible
c. or cou.—coupon
cv.—converted
deb.—debenture
div.—division
equip.—equipment
ext.—extension
extl.—external
1st—first mortgage
Lib. 1st 2nd 4¼s are 1st Liberties that were converted to 2nd 4s and then to 4¼s.
g.—gold
gen.—general mortgage
gu. or guar. or gtd.—guaranteed
imp.—improvement bonds
inc.—income bonds
int. ctfs.—interim certificates
inter. rcts.—interim receipts
jt. or joint—two or more companies
m. or mtg.—mortgage
p. m.—purchase money
real est.—real estate bond
ref. or rfg.—refunding
r. or reg.—registered
sec.—secured
s. f. or sk. fund—sinking fund
ser. A—series A
tax ex.—tax exempt
temp. or temp. ctfs.—temporary certificates
temp. inter. ctfs.—temporary interim certificates
unif.—unified
war. or warr. or warr'ts or war'nts—warrants
5s—the interest rate is 5%
1932-1947—bond may be paid 1932 and is due 1947

BONDS ON OTHER MARKETS

The New York Curb quotes a large number of bonds. All the other leading exchanges throughout the country quote bonds but have a smaller list. There is also a large miscellaneous and over-the-counter business in bonds. This market is called the "open market." Here are quoted (1) United States certificates; (2) United States insular and territorial bonds and notes; (3) foreign internal and external bonds; (4) short-term notes; (5) public utility bonds; (6) municipal bonds; (7) equipment bonds; (8) Canadian public bonds; (9) joint-stock land bank bonds; (10) Federal farm land bank bonds; (11) investment trust bonds; (12)

real estate bonds; (13) water company bonds; and (14) industrial bonds.

The following are the bid and asked prices of United States certificates of indebtedness and Treasury notes with approximate yield as given by the *Wall Street Journal* of June 10, 1926.

TABLE 8

BID AND ASKED PRICES

Coupon	Maturity:	Bid	Asked	Yield
3 %	June 15, 1926	99 31/32	To yield	2.75%
3¼%	June 15	100	To yield	2.75%
4¼%	September 15	100 5/16	100 3/8	2.78%
3¾%	December 15	100 11/32	100 7/16	2.89%
4¾%	March 15, 1927	101 3/32	101 3/16	3.15%
4½%	December 15	101 13/32	101 5/8	3.38%
	U. S. THIRD LIBERTY BONDS			
4¼%	September 15, 1928	101 3/8	101 13/32	3.60%

These certificates of indebtedness and Treasury notes are tax exempt for corporations and on holdings of $5,000, or under, for individuals.

Equipment bonds are regularly quoted on the basis of the per cent of yield as follows:

TABLE 9

EQUIPMENT BOND QUOTATIONS*

Stock	Rate	Maturity	Bid	Asked
Atlantic Coast Line	6½	1925–36	5.05	4.80
Bethlehem Steel	7	1925–30	6.50	6.00
Illinois Central	4½–5	1924–38	5.05	4.80
New York Central	4½–5	1924–39	4.95	4.70
Southern Pacific	4½–5	1924–39	4.90	4.70
Wheeling and Lake Erie	5	1925–27	5.50	5.20
Wheeling and Lake Erie	6	1925–35	5.65	5.30

* Taken from the *New York Evening Post*, April 18, 1925.

Sometimes confusion results in interpreting the bid and asked price when quoted on a per cent of yield basis. The asked price of a bond or stock is regularly higher than the bid price. In the case of equipment bonds this order seems

reversed. It would seem that the bid price should be 4.80 and the asked price 5.05 for Atlantic Coast Line equipment 6½s. Since the quotation is on a yield basis, however, if such were the case then the bid price would be greater than the asked price. If a $100 promissory note sold in the market at a yield of 5½% bid and 6% asked, then the bid price should be 94½ and the asked price 94. In order that the asked price be higher than the bid price the bid must be at a higher yield basis than the asked quotation.

STOCK AND BOND AVERAGES

An attempt has been made to construct an index that shall properly represent the price movement of the stock market as a whole. The price of any one stock or of a group of stocks might be on the decline while the market as a whole is rising. Several indexes, called averages, have been constructed with this end in view. The most widely published are the Dow, Jones and the *New York Times* averages. One or the other of these averages will be given by good financial pages. Dow, Jones and Company publish daily an average of the closing prices of 20 representative industrial stocks and also an average of the closing prices of 20 repre-

TABLE 10

DOW, JONES STOCK AVERAGES

	1926			1925			1924	1923
	Aver.	*Adv.*	*Dec.*	*Aver.*	*Adv.*	*Dec.*	*Aver.*	*Aver.*
TWENTY INDUSTRIALS								
High	**162.31**			**159.39**			**120.51**	**105.51**
Low	**135.20**			**115.00**			**88.33**	**85.76**
June 10	145.95	.39	..	126.75	..	.46	90.53	*...
June 11	147.21	1.26	..	127.85	1.10	..	92.00	97.22
June 12	148.11	.90	..	128.38	.53	..	92.19	95.97
TWENTY RAILROADS								
High	**113.12**			**112.93**			**99.50**	**90.63**
Low	**102.41**			**92.98**			**79.98**	**76.78**
June 10	111.57	.37	..	96.98	..	.17	83.44	*...
June 11	112.62	1.05	..	97.38	.40	..	84.30	84.51
June 12	112.68	.06	..	97.67	.29	..	84.60	83.71

* Sunday

TABLE 11

BOND AVERAGES

FORTY BONDS (COMBINED AVERAGE)

	Average	Adv.	Dec.	Business Days	Date
Declined to	90.11	..	1.21	24	Aug. 28, 1924
Rallied to	93.24	3.13	..	246	June 23, 1925
Declined to	91.47	..	1.77	38	Aug. 7, 1925
Rallied to	95.52	4.05	..	253	June 12, 1926

	Aver.	Adv.	Dec.	Aver.	Adv.	Dec.	Aver.	Aver.
High	**95.52**			**93.24**			**91.37**	**89.39**
Low	**93.07**			**90.60**			**86.73**	**85.77**
June 11	95.43	.06	..	93.17	.02	..	89.51	87.60
June 12	95.52	.09	..	93.14	..	.03	89.89	87.58
TEN HIGH-GRADE RAILS								
High	**92.56**			**91.40**			**90.22**	**88.55**
Low	**90.07**			**88.21**			**85.45**	**83.81**
June 11	92.17	.05	..	91.07	..	.05	88.29	86.55
June 12	92.05	..	.12	90.99	..	.08	88.79	86.65
TEN SECOND-GRADE RAILS								
High	**95.05**			**91.87**			**89.01**	**85.30**
Low	**91.79**			**88.22**			**82.27**	**80.97**
June 11	94.80	..	.17	91.04	..	.01	86.76	83.52
June 12	95.05	.25	..	91.11	.07	..	87.25	83.40
TEN PUBLIC UTILITIES								
High	**94.90**			**92.90**			**91.85**	**88.49**
Low	**92.20**			**89.89**			**85.15**	**84.88**
June 11	94.82	.10	..	92.70	.10	..	88.77	86.74
June 12	94.90	.08	..	92.67	..	.03	89.15	86.71
TEN INDUSTRIALS								
High	**100.10**			**98.34**			**96.75**	**95.51**
Low	**98.20**			**95.09**			**92.81**	**91.91**
June 11	99.94	.28	..	97.87	.05	..	94.22	93.60
June 12	100.10	.16	..	97.81	..	.06	94.36	93.57

sentative rails. Since the rails do not always move in the same direction or at the same time as the industrials it is thought best to have an average for each of the two groups of stocks. These two averages go back to 1896. The average used is an unweighted arithmetic average. The closing prices of 20 stocks are added and the sum is divided by 20.

The Dow, Jones bond averages are 5 in number: (1) 10 high-grade rails; (2) 10 second-grade rails; (3) 10 public utilities; (4) 10 industrials; and (5) 40 bonds. These aver-

ages, are like the stock averages, simply arithmetic averages of closing prices with no attempt at weighting. Table 10, taken from the *Wall Street Journal* of June 14, 1926, gives the current averages of stocks.

The table of bond averages (Table 11) is taken from the *Wall Street Journal* of June 14, 1926.

The *New York Times* stock averages are based on the average of the high prices, the low prices, and the closing prices of 25 railroads and 25 industrials. There is also an average for the 50 stocks. The average is a simple unweighted arithmetic average. The *Times'* domestic bond average is based on the closing prices of 40 bond issues. This same financial page also gives a foreign bond average based on the closing prices of 10 foreign government bonds.

NEW BOND OFFERINGS

There is always a table of new bond offerings for the week and a summary of the par value of bonds sold on the New York Stock Exchange and on the New York Curb Exchange. The *Commercial and Financial Chronicle* once each month publishes the total amount of new financing done in the entire country giving the figures for refunding and for entirely new financing separately and by classes, foreign, government, municipal, railroad, public utility, and industrial. The following is an illustration of new bond offerings for the week ending April 17, 1925, taken from the *New York Times* of April 18.

INDUSTRIAL

Bond or Note	Amount	Price	Interest Rate	Yield %	Term Years	Due	Interest Payable
Dodge Bros., Inc., Gold Debentures	$75,000,000	99	6	6.10	15	1940	M. & N.

Syndicate or Firm:

Dillon Read & Co.; National City Co.; Guaranty Co.; Blair & Co., Inc.; White, Weld & Co.; Lehman Bros.; Brown Bros. & Co.;

J & W. Seligman & Co.; Marshall Field, Glore, Ward and Co.; Bonbright & Co., Inc.; Kissel, Kinnicutt & Co.; A. Iselin & Co.; A. G. Becker & Co.; Landenburg, Thalmann & Co.; Hemphill, Noyes & Co.; Continental & Commercial Trust and Savings Bank, Chicago; Illinois Merchants Trust Co.; Union Trust Co.; Cleveland.

RAILROAD

Bond or Note	Amount	Price	Interest Rate	Yield %	Term Years	Due	Interest Payable
Missouri Pacific R. R.* Rfg. Mtg. Bonds, Series E.....	$25,000,000	99¾	6	6.02	30	1955	A. & O.

* Redeemable to May 1, 1950, at 107½, and thereafter at par, plus a premium of ½% for each six months of unexpired term.

Syndicate or Firm: Kuhn, Loeb & Co.

DIVIDENDS DECLARED

The policy of a board of directors regarding dividend disbursements is closely watched. Rumors of extra cash dividends or of stock dividend payments often affect the market for the stock in question very materially. Every trader will be guessing what the board of directors will do at the next meeting, and the Street will be full of tips and inside information. If the stock has been active with an upward tendency then "insiders" must be buying because they know that the dividend will be increased or that there will be an extra. Dividend announcements are presented something like the following:

THE FIRESTONE TIRE & RUBBER CO.
AKRON, OHIO

DIVIDEND—COMMON STOCK

A dividend of one and one-half dollars ($1.50) per share on the Common Stock of this Company has been declared, payable July 20, 1926, to stockholders of record at the close of business July 10, 1926.

DIVIDEND—6% PREFERRED STOCK

The regular quarterly dividend of one and one-half per

cent (1½%) on the 6 per cent Preferred Stock of this Company has been declared, payable July 15, 1926, to Stockholders of record at the close of business July 1, 1926.

J. J. Shea, *Treasurer*

The Baltimore & Ohio Railroad Co.

OFFICE OF THE SECRETARY

Baltimore, Md., June 30, 1926

The Board of Directors this day declared, for the three months ending June 30, 1926, from the net profits of the Company, a dividend of one (1) per cent on the Preferred Stock of the Company.

The Board also declared from the surplus profits of the Company, a dividend of one and one-quarter (1¼) per cent on the Common Stock of the Company.

Both dividends are payable September 1, 1926, to stockholders of record at the close of business on July 17, 1926.

The transfer books will not close.

G. W. Woolford, *Secretary*

A summary table of recently declared dividends is also given as follows:

Table 12

Dividends Unchanged*

	Stock of Record	Books Open	Dividend	Payable
Allied Chem. & Dye com. .....q	July 15	.....	$1.00	Aug. 2
American Can com. .....q	July 31	.....	50c	Aug. 16
Atch., Top. & Santa Fe com.....q	July 23	.....	$1.75	Sept. 1
Bloomingdale Bros. pf. .....q	July 20	.....	1¾%	Aug. 1
Illinois Cent'l R. R. com. .....q	Aug. 3	.....	$1.75	Sept. 1
Illinois Cent'l R. R. pf. 6s.....a	Aug. 3	.....	$3.00	Sept. 1
Int'l Nickel pf. .....q	July 12	.....	$1.50	Aug. 2
Milwaukee El. Ry. & Lt. 6% pf...q	July 20	.....	$1.50	July 31
Pierce, Butler P. $100 com.....q	July 5	.....	$2.00	July 15
Pierce, Butler P. $25 com.....q	July 5	.....	50c	July 15
Power Corp. of Can. 1st pf.....q	June 30	.....	1½%	July 15
P. Ser. N. Ill. no-par com. .....q	July 15	.....	$2.00	Aug. 2
P. Ser. N. Ill. $100 par com.....q	July 15	.....	$2.00	Aug. 2
P. Service N. Ill. 6% pf.....q	July 15	.....	1½%	Aug. 2
P. Service N. Ill. 7% pf.....q	July 15	.....	1¾%	Aug. 2
Smith, Howard, Paper M. pf. ....q	June 30	.....	2%	July 2
Tidewater Oil pf. .....q	July 31	.....	1¼%	Aug. 16
United Drug com. .....q	Aug. 15	.....	$2.00	Sept. 1

* Taken from the *Wall Street Journal*, June 30, 1926.

BONDS CALLED FOR REDEMPTION

The callable feature of bonds is exercised by many companies. The Trust Agreement provides that bonds of given numbers shall be redeemed or, perhaps, that the board of directors shall choose the bonds by lot.

TO THE HOLDERS OF
NEW YORK TELEPHONE COMPANY
THIRTY-YEAR SINKING FUND SIX PER CENT
GOLD DEBENTURE BONDS
DUE FEBRUARY 1, 1949

Notice is hereby given as provided in Article V of the Trust Indenture dated February 1, 1919, between New York Telephone Company and Guaranty Trust Company of New York as Trustee that Two Hundred Forty-two Thousand Dollars ($242,000) par value New York Telephone Company Thirty-Year Sinking Fund Six Per Cent Gold Debenture Bonds due February 1, 1949, issued and outstanding thereunder, and bearing the following serial numbers, have been drawn by lot for redemption for account of the Sinking Fund and will be paid on August 1, 1926, at 110% of their par value and accrued interest to that date.

BONDS AT $1,000 PAR VALUE EACH

26	2406	5493	8460	11054	14998	18487	21834
27	2511	5526	8496	11091	15263	18519	21999
115	2557	5532	8596	11347	15484	18547	22029
175	2722	5709	8610	11370	15694	19016	22083
200	2876	5745	8703	11451	15747	19055	22090

BONDS AT $500 PAR VALUE EACH

D-11	109	188	431	718	816	940	1017
60	119	246	606	731	856	955	1307
81	152	382	711	750	931	1016	1377

BONDS AT $100 PAR VALUE EACH

C-248	381	391	567	581	660	737	762	918	919

FULLY REGISTERED BONDS

Of the following fully registered bonds of the denomination of $5,000 each, $1,000 principal amount of each bond has been drawn for redemption:

V-6 V-21

Of the following fully registered bonds of the denomination of $10,000 each, $1,000 principal amount of each bond has been drawn for redemption:

X-5 X-24 X-36 X-45 X-49 X-53 X-57 X-66

Holders of the above bonds should present them for payment on or after August 1, 1926, at the Trust Department of Guaranty Trust Company of New York, 140 Broadway, New York, N. Y.

On August 1, 1926, interest on the above bonds will cease and coupons maturing after said date will become null and void. Coupons payable August 1, 1926, should be detached and presented for payment in the usual manner.

GUARANTY TRUST COMPANY OF NEW YORK,
By WILLIAM C. POTTER, *President*

Dated May 7, 1926

MONEY MARKET QUOTATIONS

The table of quotations is always preceded by a paragraph calling attention to the salient features of the day's money market. The money rates as given in the *Wall Street Journal* of July 8, 1926, follow:

TIME MONEY

Time money against Stock Exchange collateral is firmer owing to heavier demand from brokerage houses. Money for 60 days 4⅛% bid 4¼% offered, 90 days 4⅜% offered, longer dates 4⅜% strongly bid. Lending generally at 4¼% and 4⅜% depending upon time and circumstances.

CALL MONEY

Call money loaned at 4½% all day.

COMMERCIAL PAPER

Commercial paper market continues unchanged with offerings rather low. Prime names 4%, good smaller names 4¼%.

BANK ACCEPTANCES

Rates on prime bankers' bills are as follows:

	Bid	Asked		Bid	Asked
30 days	3¼	3⅛	120 days	3½	3⅜
60 days	3⅜	3¼	150 days	3⅝	3½
90 days	3½	3⅜	180 days	3¾	3⅝

Call loans against bills, 3¾%.

BANK CLEARINGS

	1926	1925		Changes
New York	$1,081,000,000	$804,000,000	Inc.	$277,000,000
Chicago	121,300,000	120,600,000	Inc.	700,000
Philadelphia	90,000,000	91,000,000	Dec.	1,000,000
Boston	85,000,000	68,000,000	Inc.	17,000,000
Detroit	27,296,406	25,225,418	Inc.	2,070,988
Pittsburgh	26,333,563	19,111,490	Dec.	2,777,627
St. Louis	21,900,000	23,100,000	Dec.	1,200,000

FOREIGN EXCHANGE RATES

The foreign exchange column takes up first a short résumé of the day's market and points out the outstanding features, attempting also to account for them. A table of quotations taken from the *Wall Street Journal*, July 8, 1926, follows:

TABLE 13

FOREIGN EXCHANGE COLUMN

				From previous close	
Exchange in $	Open	Noon	4 p.m.	Up	Off
England, £ ....d.	4.85⅞	4.85 1/16	4.85 1/16	....	....
Par 4.8665 ....c.	4.86⅜	4.86 7/16	4.86 7/16	....	....
France, franc ....d.	.0267	.0267½	.0258	....	.0015½
Par .193 ....c.	.0267½	.0268	.0258½	....	.0015½
Italy, lira ....d.	.0332½	.0335½	.0332½	....	.0012
Par .193 ....c.	.0333	.0336	.0333	....	.0012
Belgium, franc ...d.	.0254	.0255¾	.0249½	....	.0014½
Par .193 ....c.	.0254½	.0256¼	.0250	....	.0014½
Germany, mark ..d.	.2380	.2380	.2380	....	....
Par .2382 ....c.	.2381	.2381	.2381	....	....
Czecho-Slov. kr...d.	.0295¾	.0295¾	.0295¾	....	....
Par .2026, nom, c.	.0296¼	.0296¼	.0296¼	....	....
Switzerland, fr. ..d.	.1934½	.1935	.1935	.0000½	....
Par .193 ....c.	.1936	.1936½	.1936½	.0000½	....
Holland, guilder...d.	.4014	.4014	.4014	....	....
Par .402 ....c.	.4016	.4016	.4016	....	....
Spain, peseta ....d.	.1594½	.1597½	.1598½	.0008	....
Par .193 ....c.	.1596	.1599	.1600	.0008	....

TABLE 13 (*Continued*)

FOREIGN EXCHANGE COLUMN

From previous close					
Sweden, krona....d.	.2681	.2681	.2681	.0001	....
Par .268 .....c.	.2682	.2682	.2682	.0001	....
Norway, krone ...d.	.2196	.2195	.2195	....	....
Par .268 .....c.	.2197	.2196	.2196	....	....
Denmark, krone...d.	.2650	.2650	.2650	....	....
Par .268 .....c.	.2651	.2651	.2651	....	....
d. Demand c. Cables	Lower	Steady	Lower		

RANGE OF CABLE EXCHANGE

	High	Low	Close	1926 high	1926 low
England .....$	4.86 7/16	$4.86 3/8	$4.86 7/16	$4.86 13/16	$4.85
France	.0286½	.0258½	.0258½	.0390¼	.0258½
Italy	.0336½	.0333	.0333	.0404⅛	.0333
Holland	.4017	.4016	.4016	.4026	.4002

MINOR EUROPEAN EXCHANGES

	Wednesday	Tuesday
Austria, schilling, par $.14069.....$	.14⅛	$.14⅛
Hungary, pengo, par $.1749	.1755	.1755
Jugo-Slavia, dinar, par $.193	.0177⅛	.0177⅛
Portugal, escudo, par $1.07875	.0515	.0515
Greece, drachma, par $.193	.0123	.0123
Roumania, leu, par $.193	.0047½	.0047½
Finland, markka, par $.02518	.0252¼	.0252¼
Poland, zloty, par $.193	.10	.10
Bulgaria, lev, par $.193	.0072	.0072
Russia, chervonetz, par $5.146 .....5.15		5.15

FAR EASTERN EXCHANGES

	Wednesday	Tuesday
Hongkong, dollar .....$	.55½	$.55⅝
Shanghai, tael	.72⅜	.72½
Yokohama, yen, par $.4985	.4694	.4688
Bombay, rupee, par $.4866	.3631	.3638

SOUTH AMERICAN EXCHANGES

	Wednesday	Tuesday
Buenos Aires, peso, par $.4244 .....$	.4048	$.4011
Rio, milreis, last conver. rate $.3244	.1590	.1589
Montevideo, peso, par $1.0342 .....1.0204		1.0101
Valparaiso, peso, par $.1217	.1205	.1205
Lima, libra, par $4.86658 .....3.74		3.75

CANADIAN EXCHANGE

Montreal funds 3/32 of 1% premium, or $1.0009375, off $.0003125.

LONDON EXCHANGE

LONDON—New York cables closed $4.86 7/16, Paris checks 183.25, Brussels 192.50, Italy 145.75, Berlin 20.43.

To the average American, foreign exchange is a closed book. The table of pars of exchange, rates on cables, demand, 60 and 90 days' bills, and so forth, for the different countries of the world is a formidable puzzle.

Every one admits he would like to know the par of foreign moneys and to be able to tell the premium or discount at which any given foreign money is selling. The par of exchange is simply the value of the weight of the gold in the standard unit of the money of one country in terms of the standard unit of the money of another country. The English unit contains 113.0016 grains of pure gold; the American unit contains 23.22 grains. Reduce the English gold pound to dollars by dividing 113.0016 by 23.22 and the result is $4.8665. The gold content of the franc reduced to the money of the United States makes 19.3 cents. A simple device for remembering the values of the moneys of the different nations follows:

In the first place one must remember that the English gold pound is worth $4.8665. Since the English pound contains 20 shillings, the shilling is worth 24.3 cents. Now the French franc is worth 5 cents less than a shilling and the German mark is worth 5 mills less than the shilling, that is, the franc is worth 19.3 cents and the mark 23.8 cents. But every one knows the value of these three coins without this device. Now starting with Belgium and following the coast around the Atlantic Ocean and the Mediterranean Sea, we find that France, Spain, Switzerland, Italy, Greece, Roumania, Bulgaria, and Jugo-Slavia all use coins of the same value as the franc, 19.3 cents. Now going north, Poland and Latvia also use the 19.3-cent unit. Next go to the center of Europe, Germany. The mark is at par 23.8 cents. Now go north and add 3 cents (23.8 + 3) and you have 26.8 cents for Denmark, Norway, and Sweden, the three Scandinavian countries. Next go south from Germany and this time subtract three and twice three (23.8 — 3.6) and you have 20.2 cents for Czecho-Slovakia. Now go back to Holland with two times 20.2 cents or 40.2 cents. (The

fraction is not doubled.) Portugal's par is about $1.08. The old Russian ruble was worth just a little over 50 cents, to be exact, 51.46 cents. The new Russian unit is the chervonetz, worth 10 times as much as the old ruble, that is, $5.146, or just 28 cents more than the English pound. It must be added that Austria has recently adopted a new coin called the schilling, at 14.07 cents; Hungary, the pengo at 17.49 cents, and Finland, the markka at 2.518 cents.

Next go to the Far East. The Japanese yen and the Mexican peso are the same, 49.8 cents. China is on a silver basis and its exchange varies with the price of silver, so that there is no fixed par. The Indian rupee is one-tenth of the English pound, or 48.66 cents. Australia uses the English gold pound. Coming now to South America we find the most northern and the most southern countries, Venezuela and Argentine, based on the franc, with the unit of Venezuela at one franc and that of Argentine at 5 francs, or 96.48 cents. This is the gold par and is sometimes quoted, but since Argentine redeems its currency at 44% of its face value, the exchange rate is usually quoted on the paper basis with the par at 42.44 cents. The Brazilian par is just 10 cents less, or 32.44 cents. The par of Chile is 30 cents less than that of Argentine, or 12.17; Peru is the English pound at $4.8665. Canada uses the American dollar.

This scheme covers all the leading countries with which we do trading and a little repetition will enable any one to keep in mind the par value of the monetary units of the leading countries of the world. If then the rate of exchange on Brazil is 12 cents, Brazilian money is evidently at a great discount. If the Russian chervonetz is quoted at $5.16, it is at a premium. If the krone of Sweden is selling at 28.96 cents, it is at a premium.

The direction of the flow of gold, when gold is permitted to be exported by the countries concerned, is sometimes confusing. A simple way to determine the direction of the flow of gold is to remember that gold, like water, flows down hill. When the American dollar is at a premium in London

and the pound sterling is at a discount in New York, then gold will flow from London to New York, from the point where foreign money is at a premium to the point where foreign funds are at a discount.

The cable rate is always higher than the rate on drafts payable on demand. If a New York importer owes an English exporter for a shipment of goods, payment due in 10 days, he can either buy a draft today and send it to his creditor or he can wait and send a cable on the day his debt matures. If he buys a draft payable on demand, he will be out his money 10 days before the debt is due and therefore he will not be willing to pay as much as he would pay for a cable. The banker can afford to sell a sight draft cheaper than a cable, for his account in London will draw interest 10 days longer than if he had sold a cable, which would have been collected and charged to him at once. The same holds of 60- or 90-day drafts with the factor of risk now also entering in a larger degree than in demand drafts.

Fluctuations in exchange rates affect exports and imports favorably or unfavorably as the rate on the money of foreign countries advances or declines. If the English pound sterling advances a few cents per pound, Englishmen can better afford to buy our wheat, cotton, and manufactured goods. The same is true of stocks and bonds. If sterling declines in New York, Englishmen will cease buying securities and commodities, in fact, they may sell them and use the American money which they receive to buy sterling, thus taking their funds out of our market. The same is, of course, true of Frenchmen, Germans, and people of other nationalities.

BANK AND CLEARING-HOUSE REPORTS

Bank clearings are now available daily for all the great cities in different sections of the country. Some 140 cities make reports which are available weekly. Bank clearings are excellent indicators of business conditions. Better still

are debits to individual accounts, for here every check drawn against an account in a bank is recorded. Many checks never go to the clearing-house, but are settled directly between banks or are deposited in the same bank on which they are drawn. All such checks do, however, appear in debits to individual accounts or, as they are sometimes called, check transactions or simply debits. It is easy to see that debits give a more complete picture of all the transactions of a community than do clearings reported by the clearing-houses. Since a large part of the clearings or debits in New York are due to stock exchange and purely financial transactions it has been thought by some that clearings or debits outside New York are more representative of the general business situation than the New York clearings or debits. But recent studies have thrown considerable doubt on this opinion. The question in dispute has not been decided, and since the best way to study clearings and check transactions or debits is by sections, there is no need to await a settlement of the question. Weekly financial magazines like the *Commercial and Financial Chronicle, Dun's,* and *Bradstreet's* give the clearings and debits in much detail.

Bank reports come from the Federal Reserve Board, from each Federal Reserve bank, from the Comptroller of the Currency, from the New York Clearing House, from the clearing houses of the larger cities, from individual banks, and from foreign banks.

Corporation reports have already been mentioned. The financial dailies publish each day items of earnings and expenses and on the date of issue a condensed and often a full report as given out by the corporation.

THE VALUE OF THE FINANCIAL PAGE

This chapter has dealt almost exclusively with facts bearing on the movement of security prices. There are also many expressions of opinion on business conditions in par-

ticular industries and companies. It is difficult at times to discriminate between facts and opinions. The best financial writers make it a practice to indicate to their readers when they are reciting facts and when they are giving opinions, either their own or those of others. The American people are optimistic and are pleased by optimistic expressions of opinion. Moreover, an attempt is made by financial writers to keep the financial page full of good news. The pessimism that often pervades business must not get into print. Big business men know this. They know that their interviewer wants an expression of confidence. It is an interesting game to watch the newspapers to see who the big men are that do talk for publication and how they always see prosperity ahead. It seems that when business begins to get somewhat uncertain the greatest amount of talking is done. This is not by intention, but an expected consequence of the public's desire for information. When business begins to falter after a period of prosperity the reporters rush to interview the men whose opinions should be correct. Schwab, Vauclain, Willys, Ryan, Doheney, Mitchell, Alexander, Gary, Gray, Markham, Hoover, Mellon, and others are sought out. But these men are busy planning for 5, 10, 20 years ahead. They are planning for steady growth. Of course they are optimistic. The reader is at fault in interpreting the statements as applying especially to the immediate future. He is led to this interpretation by his own narrow outlook and by the suggestions of the interviewer who is seeking to answer the questions raised by the immediate uncertainty.

A financial reporter is subject to the same emotions as any other man. He goes from brokerage house to brokerage house and in a period of great activity imbibes the enthusiasm of the crowd. He describes the situation as he sees it. The reader misinterprets the perfectly accurate description of an enthusiastic crowd of traders into a forecast of the market.

Much propaganda gets into the best papers, and it seems

impossible to keep it out. Men who have this interest or that get a favorable report into print which, though not untrue, does not tell the other side of the story.

How completely wrong, or at least ill-timed, the opinion expressed on the financial page may be was illustrated by the "strong position," "sound situation" talk concerning copper that flooded the very best financial news columns of the country in January and February, 1925, when the copper stocks had almost reached their peak price. A month later they declined, for example, Anaconda from 48 to 36¾ on March 24; Kennecott, from 57¾ to 47⅛ on March 18; Miami, from 24¾ to 11½ on March 11; Utah, from 92 to 82 on March 19.

But shall one read the financial page at all? Yes, for it contains much that is useful. One must, however, be on guard every minute watching for propaganda, crowd psychology, deliberate deception, half-truth, long-time news interpreted as representing the immediate situation, gossip, rumor, ill-advised opinion, and facts which appear adequate but in reality cover up facts of opposite import.

It takes time to learn the fine art of discrimination, but once it is acquired, the financial page yields much of value. Statistics of fundamental conditions are, however, the important bases of judgment. They are also the anchor which holds one steady when everybody is rushing either to buy or to sell, when the air is full of optimism or of gloom.

The reader who is able to pick from among the mass of news the facts that have a long-time significance has acquired the basis of good investment judgment. The daily ration of current news is for the most part shallow and likely to give the uncritical reader a narrow, unbalanced, false picture of the forces that really make the market. One who does not supplement his reading of the daily and weekly financial pages by a careful analysis and systematic study of fundamental facts and statistics as published by the government and economic and statistical agencies of first rank will never have a sound basis for his opinions. But this is

hard work and not in favor with many readers who prefer to read the attractively written news features and day-to-day events rather than any solid thinking on the larger phases of business. Such reading may enable one to talk glibly, but it will unfit one to interpret soundly and to act wisely.

The facts regarding day to day events are usually well discounted by the market before they get to the reader of the financial page. This is not so true as formerly because of the speed with which news agencies gather and distribute news and because of the higher type of business morality common among boards of directors and large stockholders.

Fundamental or long-trend facts, however, may not be discounted at all before the intelligent reader comes into knowledge of them. Besides, they work out their effects slowly and are open to a large exercise of judgment by many men and are therefore always of paramount significance. No one but the professional trader should attempt to buy and sell stocks or bonds on a day to day, week to week or month to month turnover basis. One turnover each year built on the basic facts of production, trade, consumption, finance, and the market position is quite sufficient to return an excellent rate of interest on the funds invested, and at the same time the investor will be performing a valuable social service in aiding to stabilize business and investment conditions.

V

THE RELATION OF THE BROKER TO HIS CUSTOMER

Choosing your broker. Giving the order. The significance of the order to buy or sell. Margin requirements. Commissions and interest. Pledging of stock by the customer. Pledging of customer's stock by the broker. The rights of the customer in bankruptcy. Identification of securities or funds. Securities in a preferential position. Conditions of possession. The broker's reports of transactions. The moral relations of broker and customer.

THE relation between the broker and his customer should be one of confidence, good-will, and service. At times the broker will have relatively large amounts of the customer's property in his keeping. On the other hand, the customer will be largely in debt to the broker. Custom, law, and good business policy are laying down certain business practices as fundamental to a satisfactory relationship between the customer and the broker. It is the purpose of this chapter to point out accepted standards to which both parties should make an earnest effort to conform.

CHOOSING YOUR BROKER

The first step in a satisfactory business relationship that the investor or speculator must take is to choose a broker whose service is adequate and whose financial ability and responsibility are such as to command the full confidence of the investor.

1. Your broker should be a member of the New York Exchange. One reason for this is that a smaller percentage of members of the Exchange fail than of non-members. For some years the Stock Exchange has sent out questionnaires to all members. The answers to these questions were

expected to give the Exchange a complete picture of the firm's financial condition. These reports were made twice each year. The purpose was similar to that of the Comptroller of the Currency in requiring reports of the condition of National banks at least three times each year. Because several members failed, though their reports had showed nothing serious, it became evident that these answers were made to order. In the latter part of 1924 one of the oldest and supposedly soundest firms in Wall Street failed. One of the partners in whom every one had the greatest confidence answered the questionnaire of the Stock Exchange. The firm failed for several millions of dollars, and the losses of its customers will be very heavy. To correct such a situation the governing committee of the Exchange in October, 1924, passed two resolutions requiring that (1) each firm carrying margin accounts for customers must have a complete audit made as of the date of the answers to the questionnaire; (2) the data are to be used in the answers; (3) a statement must be made to the effect that such an audit has been made; (4) it must be signed by the member or members of the Exchange and all the partners and attested by the auditors; (5) each firm not carrying margin accounts, but holding securities for safekeeping must report to the Exchange on call upon the securities held and must report at least once each year, that all such securities have been checked and are intact. It is hoped that close supervision will soon eliminate all failures of members of the Stock Exchange.

Not only does the Exchange closely watch the financial condition of its members, but it enforces a high standard of business practice. It is with these facts in mind that it is recommended here that on the whole, the broker selected should be a member of the New York Stock Exchange. There are, however, many houses of high standing which are not members and if the investor knows that the management is capable and honest and if he can keep in reasonable touch with the financial conditions of such non-member

it might be advisable to choose such a firm in preference to a firm of which he knows very little though it is a member of the Exchange. The larger banks are developing very active bond departments which will sell to a customer of the bank not only bonds, but also stocks if the customer so desires. The bank's New York correspondent is a member of the Exchange and handles the business for the bank. Banks often make no charge for their service beyond the commission which the New York house charges them. On stocks listed on the New York Stock Exchange a non-member brokerage house will take a commission in addition to the regular commission charge by the member house. The Exchange sets certain minimum rates which must be net to all members. No member dare split commissions with a correspondent. A non-member house, thus, must add its own commission to that of the member in order to make any profit on its business. Unless the non-member broker, therefore, gives a very special service there is no point in paying the extra charge.

2. The firm should be a well-known established institution. The partners in the firm should be above suspicion. They should have a reputation for ability, honesty, and square dealing. The manager, if not a partner, should measure up to the same standards.

3. The partners and manager should not speculate on their own account. When a man is more or less deeply interested in the market, his advice will tend to be biased. His judgment will be confused by his wish. If the managers are given to speculation, their success will be a factor of danger. One success leads to another and another until the firm's funds and the customers' funds are risked and then the crash comes. Loss leads down the same road. In the first case, greed to become wealthy causes the downfall and, in the second instance, the determination to retrieve losses. Many men are attracted to the office of some bright, dashing young broker who has made a number of very prof-

itable deals and has seen to it that they are well advertised though his losses were kept quiet. To keep up the reputation of big gains he must drive an expensive car and frequent the best hotels. Many men take all this for evidence of extraordinary ability, and entrust their funds to their smart broker. The end comes sooner or later, but it comes.

4. Some brokers take the opposite side of the market to that of their customers. If the customer buys they sell short or what amounts to the same thing, they take the customers' money on a small margin basis but buy no stock at all, hoping that a drop in the market will soon wipe out the margin, so they can pocket the customer's cash deposit. A broker of this type is operating a respectable-looking bucket-shop.

5. Your broker should have adequate capital and credit so that he can always accommodate you with all the credit of which you are worthy at the best market rates. You will at times want to trade on margin and the broker should then be able to supply the necessary funds at the best figure. Moreover, you will want at times to withdraw funds from your account. Your broker should have plenty of funds available so that you can withdraw on very short notice any reasonable amount. Do not pay extra or special commissions. Your broker should allow you a reasonable rate of interest for credit balances with him.

6. Your broker should not allow you to trade on small margins. He should insist on adequate margins and should see to it that they are kept up. If he is lax with you, he will allow others to take advantage of his leniency. If he allows you to trade on five, eight, ten or even twenty points in some stocks, he is probably running a bucket-shop.

7. Your broker should be able at all times, on reasonable notice, to furnish you with the available information on any company in whose securities you wish to invest your funds. He should also be able to give the market for such securities.

He should have a competent statistical staff and should subscribe to the best trade and investment services. He should have a ticker service and a board. Commission houses and members of the New York Stock Exchange have the ticker service and a board room. The long pull trader and investor, however, do not find the ticker and board room as essential as the short swing trader for they can keep in daily touch with the market through the financial page and by telephone communication with their broker.

8. Your broker should not be the type that is trying to sell you something every time you go to his office. His customer's men are there to call your attention to any significant developments in any part of the market. You even appreciate hearing the latest gossip and tips on the market, but you do not want any one to insist that the gossip or tip is a sure thing. You want to be free to do your own thinking and when you do not have adequate data you will ask for them. His function lies in giving the information.

9. But by all means make connection with a first class house. Do not buy anything from any itinerant security salesman. Choose a broker in whom you have full confidence, treat him squarely, give him all your business, let him know your investment plans, get his advice, but after all use your own head and make your own decisions.

GIVING THE ORDER

After you have chosen your broker, make a deposit of cash and securities with him in sufficient amount to provide an ample margin for all the trading you expect to do in the near future. Do not at once ask your broker to quote you the minimum margin he will allow. Do not expect the broker to carry you on the same margin that he asks of his old and tried customers. Expect to establish your credit, and to do so, nothing speaks as loudly as plenty of margin always kept intact, and careful, conservative trading.

Orders are two general classes, buying or selling. Each of these classes then may be (1) at the market, or (2) limited. The investor calls his broker on the telephone and says, "Buy 100 shares of United States Steel at the market." The broker understands this to mean that he shall buy the stock named as soon as he can reasonably transmit the order to the floor of the New York Stock Exchange and to his man there who is to buy at once at the price then quoted at the steel post. If the order is given, "Buy 100 shares of United States Steel at 144," the order is known as a "limited" order. A definite price is set and the broker will not buy until the price goes down to 144. But suppose the price does not decline to 144 today shall the broker consider the order good for tomorrow also? The customer's man or salesman on taking your order will ask, "Do you want that an open order?" or simply, "Open order?" A limited order with nothing specified as to the time of expiration of the order is taken as good for the day only on which the order is given. In writing or sending a telegram to your broker ordering him to buy or sell at a specified price, the time of expiration of the order should always be stated, even if the order is intended to be good for the day only. If nothing is said, the broker will interpret your order as good for the day only, but will be uncertain as to what you intended. You may have forgotten to designate your intent. An open order stands as given, without any time limit. Suppose I have 100 shares of American Locomotive bought at 90. The price now is 110 and I believe it will go to 115 and perhaps higher. I give my broker an open order to sell at 115. When the stock reaches 115, I will be sold out.

It is customary in some brokerage offices to send out each Friday through the mails a confirmation stating that the customer has certain orders "in open." At the end of three months, if the order has not been canceled or executed, the customer receives through the mails a confirmation stating that the order is "in open" and asking that the customer sign the confirmation and return it if he wishes the open

order to continue. If the customer signs the confirmation the order will be kept "in open" for another three months. If he does not return the confirmation the broker automatically cancels the order.

A type of limited order not generally discussed in books on stock trading is the "immediate" order. In an active market after a given stock has been well accumulated, or, on the other hand, well distributed, the intervals between sales may amount to a number of points. The same is true of stocks that are inactive, so that there may be but one sale per day or only two or three per week. A limited order to buy, say, Sears Roebuck at 55 may never be executed and while the trader is awaiting a further decline in price a turn may come and the price may mount to 58 or more for the next few sales. An "immediate" order at 55 either would have been executed at 55 at once, or if the market price was at 55½, so that no purchase could be made, the order would have been automatically canceled and a report of the condition of the market sent to the customer, who could then give a market order, or a limited order at a fixed price more in accord with the market situation. An immediate order to buy 100 shares Sears Roebuck common, for example, reads, "Buy 100 shares Sears Roebuck at 55, immediate." The meaning of the word "immediate" is that the broker must execute the order at once if he can and, if not, to cancel it and report the market. The "immediate" order must not be confused with the "market" order. The market order is executed at once at the best price then obtainable, the immediate order is executed at once if the designated price is obtainable, but, if not, the order lapses at once and the broker immediately makes a report as to the price situation.

The customary periods for which orders are given are as follows: (1) "at the market"—executed immediately at the market price; (2) "day orders"—good for the day on which the order is given; (3) "good through May 5" or "good through May 3, 4, 5"—automatically void after May 5; (4) G. T. W.—"good this week"; (5) G. T. M.—"good this

month"; (6) G. T. C.—"good till countermanded"; (7) open orders—good till canceled; (8) stop-loss orders, also called "stop orders"—a limited order placed at a price that limits the trader's loss or protects a gain.

All these different types of orders may be used either in buying or in selling. Only limited orders, that is, orders to buy or sell at a fixed price, can involve time as implied in all the classes above except "at the market" orders.

Something should be said here also about the stop-loss order or, for short, the stop order. Suppose I buy Texas Co. at 55 and want to protect myself against loss due to a possible decline in the market. When I give the order for Texas Co. at 55, I also order the broker to sell at 52 "on stop." If the price declines to 52 I am sold out and my loss is limited to 3 points. The use of stop-loss orders is so important that it will be discussed somewhat at length in a later chapter.

If the stock for which a broker holds a limited order sells "ex-dividend," he will send his customer a notice saying that the price specified in the order will be lowered by the amount

ALL ORDERS EXPIRE ON DAY OF DATE UNLESS OTHERWISE STATED.

BLANK & CO., Columbus

Date July 6, 1926

SELL FOR MY ACCOUNT AND RISK.

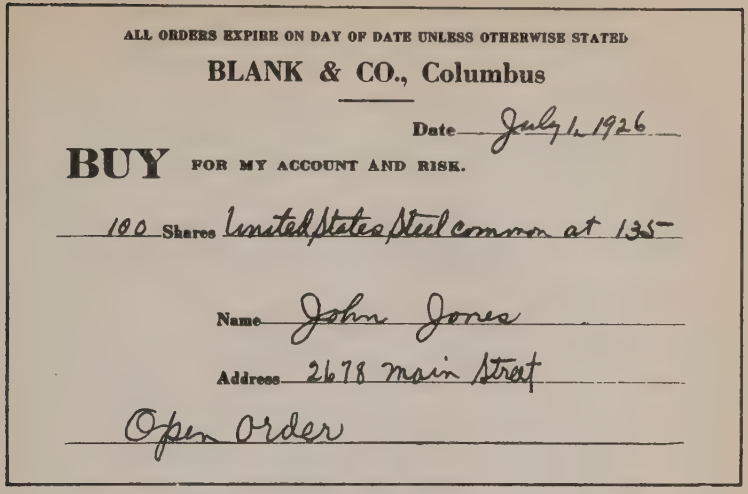
100 Shares Baldwin Locomotive common at 118

Name John Jones

Address 2678 Main Street

G. T. C.

Figure 2: Specimen of "Sell" order.


ALL ORDERS EXPIRE ON DAY OF DATE UNLESS OTHERWISE STATED

BLANK & CO., Columbus

Date July 1, 1926

BUY FOR MY ACCOUNT AND RISK.

100 Shares United States Steel common at 135

Name John Jones

Address 2678 main Street

Open Order

Figure 3: Specimen of "Buy" order.

of the dividend payment. If the customer does not approve he can cancel his order or change it. Some brokers cancel the order and request instructions from the customer. The latter is the custom if the stock sells "ex-rights" before the limited order is executed.

Illustrations or order blanks are given herewith.

THE SIGNIFICANCE OF THE ORDER TO BUY OR SELL

While the form and wording here used is very simple, yet its implications are many and far-reaching. It is a contract between two parties. On the one hand, it states that the customer proposes to buy or sell a specified number of shares of a given stock at the market or at a stated price; on the other hand, it gives the broker full power to act for the customer in carrying out the transaction. It implies that, since the broker is a member of an exchange with a constitution and by-laws and with settled modes of procedure, the broker, in carrying out the transaction, will proceed in accord with the rules of the exchange and that he will violate none of

them. (See *Clews* v. *Jamieson*, 182 W. S. 461.) The broker in accepting the order agrees to execute it in good faith with such due diligence and reasonable care as would ordinarily be expected of a broker, and in accordance with all the rules and customs of the exchange of which he is a member.

Many firms have their order blanks printed to read, "Buy for my account and risk." When this phrase does not appear in the blank it is implied as one of the established customs of the business. The phrase signifies that all risk is assumed by the customer as long as the broker uses due care and diligence. The broker does not guarantee the value of the stock nor does he guarantee the genuineness of the stock certificates, though, as a matter of fact, he does keep careful watch for forgeries and illegalities. If, however, it is shown that he has not taken reasonable care to detect forgeries, he is responsible for all loss due to his negligence. In this connection it must be noted that no loss accrues to the broker if, in good faith, he has made a contract to buy or sell, as the case may be, but, on account of circumstances over which the broker has no control, the party with whom he made the contract fails to deliver or to accept the stock and pay for it. The order does not imply that the broker agrees to buy or to sell, but it does imply that he agrees to make the contract to buy or sell, with due diligence and in good faith.[1]

If the second party to the contract fails, it is the part of the customer to take such legal steps as seem wise. The Stock Exchange has provided ways and means to compel members to keep their contracts. It also protects members from loss due to default of contracts by other members in so far as practicable.

If it is the intention of customers not to deliver stock sold, or not to receive stock bought, so that the transaction involves no transfer of stock, the New York laws hold that

[1] See article by Eliot Norton, "The Purchase or Sale of Securities through a Stock Broker," *Annals of the American Academy of Political and Social Science*, 1910, p. 34.

such customers are gambling in differences and that such transactions are invalid. Brokers knowing that the parties to the transaction do not intend that there shall be a transfer of stock cannot legally enforce their commissions nor recover any advances of funds they may have made. The order by the customer implies an intention that stock shall be transferred from seller to buyer.

MARGIN REQUIREMENTS

When John Smith signs the order to buy 100 shares of Kennecott Copper, he thereby agrees either that he will pay in full or that he will provide funds or stock in sufficient amount to meet the margin requirements of his broker. If he pays in full, the broker will attend to all the details of transfer into John Smith's name and will deliver the stock to him, or if Smith desires, the broker will take the stock for safe-keeping, collect dividends, and credit Smith's account with them.

If John Smith decides to trade on margin, he will need to meet the broker's margin requirements. Many John Smiths do not realize that margin requirements are put at a figure that represents a minimum point of safety in the judgment of the broker. If he requires 20 points, or $20 per share, that means that in his judgment 20 points is the least amount that affords safety to himself. The Smiths—that is, the public—also forget that in setting the margin requirement the broker has them in mind, and his judgment is that, though, perhaps, he would be safe enough on a somewhat smaller margin, his customers are not safe from loss unless they have at least his margin requirements provided for. It should be the unfailing practice on the part of the Smiths to carry a much larger margin than the minimum requirements.

The amount of the margin required depends on several factors. If the stock is high priced, a relatively small percentage of fluctuation means many points loss or gain. A

10% decline in a stock selling at $250 per share would quickly wipe out a margin quite adequate to protect against the fluctuations of a stock just as unstable but selling at perhaps $65 to $70.

A second factor essential in determining the amount of margin is stability. If a stock varies very little in price from day to day the margin that offers safety need not be nearly so large as on a stock of the same price but with wide fluctuations. A third factor is the activity of a stock. If a stock is active the spread between bid and asked price is usually narrow, and the price difference from one sale to the next will be small. On the other hand, if sales are made only occasionally the spread between bid and asked price is wide and a sale at the end of the week may be at a very different price than the price quoted at the beginning. A fourth and very important factor is the general situation in the market. If the market as a whole has been advancing rapidly for some time and is nearing a point of uncertainty, large margins must be insisted upon. The higher the market goes, the larger the margin on purchases. In a falling market, margins on purchases must be heavy, but need not be so heavy on the short side of the market unless a strong rally is to be expected. In a rising market, the short side should be especially well margined.

A fifth factor is the customer's credit standing and reputation for being on the right side of the market. It is thus evident that a broker cannot set any fixed margin for all stocks and for all customers. The only sound practice open to him is to decide upon his margin requirements for each stock transaction and for each account. If the Stock Exchange were to fix any definite margin, either at a certain number of points or at a designated percentage, such a ruling would necessarily be impracticable from the point of view of proper protection for both the broker and the customer. The constitution makes no definite requirement as to margins, and the Governing Committee has been wise enough not to prescribe any absolute terms. The Govern-

ing Committee does, however, insist on ample margin requirements by members, and the constitution provides "that the acceptance and carrying of an account for a customer, either a member or a non-member, without proper and adequate margin, may constitute an act detrimental to the interest and welfare of the Exchange, and the offending member may be proceeded against under section 8 of Article XVII of the Constitution." That the Exchange is concerned about the margins allowed by its members is doubly evident from section 8 of Article XVII. It reads as follows: "The Governing Committee may, by a vote of a majority of all its existing members, suspend from the Exchange for a period not exceeding one year, any member who may be adjudged guilty of an act which may be determined by said Committee to be detrimental to the interests or welfare of the Exchange."

The old 10-point margin has almost wholly disappeared from legitimate brokerage houses except in the case of stocks selling at a relatively low and consistently stable price. Conservative stocks selling from 75 to 100 should surely not be carried at less than a 20-point requirement under the best market conditions and stable stocks selling at 100 to 125 should have 25 to 35 cover. The stock of so well managed a company as the United States Steel Corporation fluctuated between 94¼ at the low of June and the high of 121 in December, 1924. On January 23, 1925, the price was up to 129⅝, then dropped slowly to 121⅝ by March 18. The next 12 days saw the stock decline to 112⅝ on March 30. New York Central declined from 123½ on March 4, 1925, to 114¾ on March 24. General Electric common rose from a low of 193½ early in the year to a high of 322 in December, 1924, but by February 17, 1925, it had declined to 227¼. General Motors common rose from 55¾ in October to 66⅛ in December, 1924, then declined to 64⅝ on January 5, 1925, then rose to 79 on February 10 and declined to 69½ on April 3. By November 7 the price reached 149⅜, followed by a decline to 113¼,

March 30, 1926. The rally which followed carried the price to 148½ on June 18.

A few figures like these show what can happen in a relatively short time in a market that has been overactive, and the need of large margins in the best of stocks at such a time. In quoting margin requirements the margin may be stated in terms of points or dollars or in terms of percentage. A point is 1% on a par value of $100 or $1. A stock with par value $100 but selling at $15 cannot call for a margin of 20 points or $20. The high-priced stocks must be covered by many points. Perhaps the best plan of quoting margins is a combination of the point and the percentage methods, that is, the margin on all low- and all high-priced stocks may be quoted as a percentage of the market price, and all stocks selling at prices between the two extremes may be quoted in terms of points or dollars.

COMMISSIONS AND INTEREST

The broker in accepting the customer's order agrees to attend to all the technical details involved in the buying or selling of stock on the Exchange. For this service he receives a commission. If the stock is to be carried on margin he borrows the money at his bank to pay for the stock. In borrowing he regularly pledges the customer's stock for the loan of funds. He must pay interest on the borrowed funds and therefore he charges his customer a rate of interest on the accommodation.

Commission rates. The rates of commission charged by members of the Exchange have been raised twice since the war. These rates are net. No rebates, discounts or allowances of any sort, either direct or indirect, may be given by the broker. In case a member has part in a joint account where others at interest are not members, or when a member transacts business for a non-member partner or a firm in which he is not one of the regular active partners, the mem-

ber shall charge the same minimum commission as is prescribed for non-members.

For about three years prior to November, 1924, the following minimum net commissions applied to parties not members of the Exchange:

	Per Share
On stocks selling below $10 per share	7½ cents
On stocks selling at $10 and above per share, but under $125 per share	15 cents
On stocks selling at $125 per share and over	20 cents

The minimum commission on any transaction shall not be less than $1.

Since the first of November, 1924, the following scale of minimum commissions has been in force:

	Per Share
On stocks selling below $10 a share	7½ cents
On stocks selling at $10 and above but under $25 a share	12½ cents
On stocks selling at $25 and above but under $50 a share	15 cents
On stocks selling at $50 and above but under $75 a share	17½ cents
On stocks selling at $75 and above but under $100 a share	20 cents
On stocks selling at $100 and above but under $200 a share	25 cents

On stocks selling at $200 a share and over, 25 cents a share for the first $200 in price and 5 cents a share additional for each $50 increase in price or fraction thereof.

Members of the Exchange executing orders for fellow-members follow a scale of rates much lower than the rates to non-members. These rates will be given in their proper place in a later chapter.

Interest charges. The broker charges interest on debit balances and pays interest on credit balances. Since an active trader will be buying and selling frequently, his balance with the broker will be changing almost every day or even many times the same day. Interest is computed on the

balance as it stands at the close of business each day. If a customer's debit balance on May 1 is $10,000, and he sells $4,000 worth of stock on May 2 and on May 4 buys stock worth $6,000, then $10,000 will run at interest for one day, $6,000 for two days, and $12,000 until the next transactions come into the account and change the amount of the balance. At times the account will show a credit balance. The time during which a credit balance draws interest is computed from day to day the same as on a debit balance. A flat rate of 6% is customarily used to compute the interest on both the credit balances and the debit balances. At the end of the month the interest on the debit balances is adjusted to the rate allowed on credit balances. Suppose at the end of the month the interest on the debit balances amounts to $120 and on the credit balances, $50, both being computed at 6%. If the broker charges 5% and pays 3%, the adjusted interest, items will be $100 and $25, respectively, and the customer's account will be charged the difference, $75.

The rate at which the adjustment is made is ascertained by finding the average rate the broker has paid on all his borrowed money. To this average rate he adds a small charge for his service in managing the loan, perhaps ¼ to ½ of 1%. Suppose a broker finds that the average cost of his money is 4½% and he adds ½% for his services. Then his rate to the customer would be 5%. The rate allowed on credit balances is the result of many competitive factors which need not be taken up at this time.

Special mention must be made of the short sale. If a customer sells 100 shares of Baldwin Locomotive short at 130, the broker will receive $13,000 and credit the customer with the proceeds after deducting commission and tax. New York State, since 1905, has levied a stamp tax of 2 cents for each $100 or fraction thereof of par value of stock sold or transferred to another person, the seller paying for the stamps. Since many corporations have issued stock without par value, the law was amended so that a stamp tax of 2

cents per share of no-par stock must now be paid. During the war, a Federal stamp tax was placed on the sale or transfer of stock of 2 cents on each $100 of par value and 2 cents on each share of no-par stock. The total tax paid by the seller of stock is, therefore, 4 cents per share. This rate applies as well to the short sale as to the sale of long stock.

On a short sale, however, the broker must deliver the stock sold to the buyer the next day. To do this, he borrows the stock from some one who has stock on hand and is willing to lend it. The lender of the stock requires the borrower to deliver to him cash to the market value of the stock lent. The broker allows no interest on the credit as long as the short transaction is not covered by buying in the stock and delivery to the lender. The credit on the broker's books due to a short sale, therefore, does not enter into the computation of interest.

PLEDGING OF STOCK BY THE CUSTOMER

We have thus far considered the broker as the agent of the customer. When, however, the customer asks the broker to furnish him with funds required in addition to the margin provided by the customer and pledges the stock bought, a new relationship arises in that the broker and customer now stand in the relation of pledgee and pledgor and customs and laws pertaining to this relationship apply. In the case of *Markham* v. *Jandon,* 41 N. Y. 235, now famous as having laid down the basic principles upon which later law has developed, the brokers contended that in furnishing the funds on a margin transaction they were simply carrying out their functions as an agent of the customer. The plaintiff contended that in the execution of the order to buy stocks the brokers acted as agent, but in supplying funds in behalf of the customer the brokers became creditors of their customer and in so far as they held collateral as a pledge for the payment of the loan the new relation of pledgor and pledgee had arisen. The court denied the claim of the

brokers and held for the plaintiff, the customer, and pointed out that the law defining the relationship between pledgor and pledgee applied. The court summarized the law on the point at issue in a sentence: "The creditor may resort to judicial process, or he may sell, without judicial process, upon giving notice to redeem, and giving notice of the time and place of sale." In enlarging upon the phrases "giving notice to redeem" and "giving notice of the time and place of sale" the court said: "To authorize the defendants to sell the stock purchased, they were bound first to call upon the plaintiff to make good his margin, and, failing in that, he was entitled, secondly, to notice of time and place where the stock would be sold; which time and place, thirdly, must be reasonable."

The broker thus has no right to sell pledged stock (1) unless the margin becomes impaired,[2] (2) unless he gives notice of such impairment and demands a specific sum or gives such facts as indicate the specific sum that must be provided;[3] (3) until a reasonable time has elapsed during which the pledgor might make good the impaired margin; (4) unless notice be given of a definite time and place of sale; and (5) unless the time and place be reasonable. In another connection the New York courts stated the reason for requiring notice of a definite time and place of sale as follows: "The object to be attained by giving the notice is to afford the debtor opportunity to redeem, and to be present at the sale to see and know that it is fairly conducted and the property disposed of to the best advantage."[4]

But suppose the broker should be able to comply with all these conditions, may he sell the stock on the New York Stock Exchange or on some other well-organized exchange like that of Philadelphia or Boston? The courts have consistently held that such exchanges are private markets, be-

[2] See also *Taylor* v. *Ketchum,* 35 How. Pr. 289.

[3] See *Boyle* v. *Henning,* 121 Fed. 376.

[4] See *Wheeler* v. *Newbould,* 16 N. Y. 392, also *Small* v. *Housman,* 208 N. Y. 125.

cause they permit none but members to trade on the floor of the exchange. The same reasoning which requires that notice of a definite time and place be given and that the time and place be reasonable, also makes it mandatory that the sale be public and open to any one in order that bidding may be freely competitive and that the debtor may be present "to see and know that it is fairly conducted and that the property is disposed of to the best advantage."

In the case of *Markham* v. *Jandon* above mentioned a minority of the judges gave a dissenting opinion which pointed out the fact that under the rapidly fluctuating conditions which frequently exist in the market for stocks it would be next to impossible for brokers to live up to the law without frequently suffering severe losses. And, since the customer had not kept his part of the contract in maintaining a proper margin, the brokers should not be held for loss that has accrued to the customer due to the action of the brokers in selling securities held in pledge for the customer's debts. The majority opinion gave due weight to these points, but replied that if the nature of the brokerage business involved special hazards then the broker should protect himself by a contract between himself and his customer which gave him such rights as would afford proper protection. This opinion has been reiterated in one form or another again and again by the courts and forms the basis of the contract, written or implied, which the broker's customer assumes at opening his account and with each order to buy or sell that he gives his broker.

PLEDGING OF CUSTOMER'S STOCK BY THE BROKER

That the broker carrying stock, purchased by a customer on a margin, may pledge such stock with a bank or banker has long been held as a fixed principle by the courts. The pledgee bank or banker obtains a "good" lien on the pledged stock and can sell the pledged stock without giving notice to the customer who is the owner of the stock.

The broker, however, must stand ready to meet certain conditions. First, he must have on hand or under his control an equal number of shares of the same stock so that if the customer tenders to the broker payment in full the broker can deliver the stock without going into the market to buy it in. In *Mayer* v. *Monzo,* 151 N. Y. App. Div. 866 (1912) the court gives a summary of preceding decisions on this point as follows: "It is settled that a broker who buys stocks for a customer on margin, and to whom the customer still owes a part of the purchase price, is entitled to pledge the stocks so bought for so much of the purchase price as his customer still owes. The broker's whole duty to his customer under such circumstances is either to have on hand or under his control the stocks which he is carrying for his customer, but he is not required to do both, that is, to have the amount of stocks under control and also, an equal amount on hand."

In the second place, he must not pledge the stock for an amount larger than is owed him on the stock by the customer without the customer's consent.

The New York court saw in its decision in the case of *Mayer* v. *Monzo* that it would be almost impossible for a broker to attend to the details involved in maintaining the ruling in previous cases;[5] that a broker may not pledge stock held for a customer for a loan larger than the amount still owed him on the stock. A broker with hundreds of active accounts, each buying and selling, switching from one stock to another, depositing and withdrawing funds, would have to keep the stock of each customer separate from all other pledged stock and make incessant changes both in the stock pledged and the amount borrowed. The New York court, therefore, ruled that the necessary control of the same amount and kind of stock as that owned by the customer did not require that the stock be not pledged for an amount larger than the customer's indebtedness but that "if the

[5] See *Douglas* v. *Carpenter,* 7 N. Y. App. Div. 329 and *Strickland* v. *Magorn,* 119 N. Y. App. Div. 113.

broker has the stock under his control (even if it be pledged), and can resume possession by paying the amount borrowed thereon, not exceeding the amount which the customer owes on account of the purchase, there has been no conversion."

This decision was given in 1912 previous to the New York law of 1913, which makes it a felony punishable by a fine of not more than $5,000 or by imprisonment for not more than two years or both when a broker pledges securities held by him on a margin transaction for an amount greater than that owed by the customer.

Thirdly, in case his pledgee sells the stock without giving notice to his customer so that the customer cannot exercise his right to put up more margin the broker is responsible for loss accruing to the customer.

On all these points the laws and rulings of the courts of the several states differ. We are here concerned only with the law as it applies to brokers in New York State.

Brokers, following the suggestion of the courts that they should make special contracts with their customers so as to protect themselves against the hazards of their business, have placed in their order blanks, confirmation blanks, signature cards, and so forth, such conditions as give them adequate protection and simplify the necessary technique of the transaction. Below is given an illustration of such an agreement.

It Is Agreed Between Broker and Customer:

1. That all orders are received and executed subject to the rules and customs of the market or exchange (and its clearing house, if any) where order is executed;

2. That actual receipt of securities purchased and actual delivery of securities sold is contemplated by both parties;

3. That all securities purchased or received for the customer's account and not paid for in full may be loaned by the broker, may be used by him in making deliveries or substitutions, or may be pledged either separately or together with other securities, either for the sum due thereon, or for a greater sum, without retaining for delivery a like amount of similar securities, all with-

out further notice to the customer, and with his consent, which is hereby specifically given;

4. That the broker may, whenever in his judgment it appears necessary for his protection, and without any further notice to the customer, close out the customer's account or accounts, in whole or in part, by selling the securities therein held at public or private sale without any tender to the customer of the securities sold, or by buying at public or private sale any or all securities sold but not received from the customer for delivery;

5. That all statements of accounts current as rendered the customer from time to time are acknowledged by the customer to be correct unless written notice or exception thereto be given the broker within four days after their receipt.

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The first section of the agreement authorizes the broker to execute the order according to the rules and usages of the stock market in question. The second section is the broker's protection against the law on gambling on the stock market and against the violations of the rules of the exchange of which he is a member. The third section authorizes the broker to do what the law does not allow except by special contract, namely, to use the customer's stock to make deliveries or substitutions or to pledge them mingled with other securities for a loan larger than the amount owed on them by the customer. The broker, however, is not given this right if the securities are paid in full.

A member of the New York Stock Exchange may not take advantage of this contract and pledge more of a customer's securities as security for a loan than is fair and reasonable considering the amount the customer has paid on his account. For example, if the customer has paid only the minimum marginal requirement the broker would be justified in using all the securities as collateral for a loan. But if, say, 75% of the cost of the securities had been paid, a much smaller amount might be pledged.

"An agreement between a member and a customer, authorizing the member to pledge securities, either alone or with other securities carried for the account of the customer,

either for the amount due thereon or for a greater amount, or to lend such securities, does not justify the member in pledging or loaning more of such securities than is fair and reasonable in view of the indebtedness of said customer to said member."[6] Furthermore, no form of general agreement between a member of the Exchange and his customer can justify the broker in using securities carried for the customer to make delivery on any account in which the member or his firm or a partner is directly or indirectly interested.[7]

Section 4 gives the broker the right to sell securities held in pledge at a private sale without demand for more collateral, or tender of the stock held or notice of the time and place of sale whenever, in the judgment of the broker, it is necessary to do so to protect his interests. In case the customer is short of stock the broker is authorized to buy stock and cover without further notice. Section 5 gives the broker the right to hold all statements of account sent to the customer as correct if no objection is made within four days of receipt thereof.

THE RIGHTS OF THE CUSTOMER IN BANKRUPTCY

A member of the New York Stock Exchange who fails to meet his contracts or who is a member of a registered firm that is insolvent must, according to the rules of the Exchange, give prompt notice of such failure to the president of the Exchange. It is the duty of the president to inform the Exchange at once. Names of insolvent members are announced from the rostrum of the Exchange by its president. Such insolvent member is at once suspended until in the judgment of the Committee of Admissions he has made proper settlement with his creditors and has met the requirements of the Exchange as to business morality when he may be reinstated by a two-thirds vote of the committee.

[6] *Rules Adopted by the Governing Committee Pursuant to the Constitution of the New York Stock Exchange,* chap. xii, sec. 4, 1925.

[7] See *ibid.,* sec. 5.

A broker "who, knowing that he is insolvent, accepts or receives from a customer, ignorant of such broker's insolvency, money, stocks, bonds, or other evidences of debt belonging to the customer otherwise than in liquidation of, or as security for, an existing indebtedness, and who thereby causes the customer to lose in whole or in part such money, stocks, or bonds, or other evidences of debt is guilty of a felony punishable by a fine of not more than five thousand dollars or by imprisonment for not more than two years or both. A person shall be deemed insolvent within the meaning of this section whenever the aggregate of his property shall not, at a fair valuation, be sufficient in amount to pay his debts."[8]

Because of the great variety of situations that have arisen the rulings of the courts as to the rights of the customer in relation to his insolvent broker are numerous and complicated. It is not the aim here to go into any detailed discussion of the law and opinions of the courts. A few typical situations only will be taken up. The situations that are most common are somewhat as follows: (1) a customer has deposited securities with his broker for safe-keeping; (2) a customer has deposited money and pledged stock on a margin transaction but the stock has not been repledged; (3) the broker has repledged the customer's pledged stock commingled with the stock of other customers for a loan exceeding the amount owed by the customer whose stock is repledged; (4) the broker has sold securities for the customer and carries the proceeds as a credit to the customer; (5) the broker has pledged the stock which he holds for safe-keeping and has a loan on it at a bank.

The general principle that applies to all such cases is the doctrine of tracing funds held in trust. Following this principle the property of customers of an insolvent brokerage firm falls into two classes: that which can be traced and found and that which cannot. The holders of property which cannot be traced are classed with the general creditors

[8] Laws of the State of New York, Sec. 955.

of the firm and are so dealt with by the receiver or assignee. The property which can be traced is distributed to its owners by the court. Courts have held that such owners are of different classes or grades of preference as to the property, some having preference ahead of others, for example, securities that have been unlawfully pledged by the broker have preference over securities that have been pledged under due authorization by the customer. According to the contract to which the customer assents and by custom, all securities held by the firm in the customer's open or active account are subject to lawful pledge. Customers' claims thus may be said to be of two classes: general and special. The special claims are of two types, ordinary and preferred. The preference given to special as against general claims depends on the tracing and identification of the securities involved and the manner in which the securities are held.

IDENTIFICATION OF SECURITIES OR FUNDS

Since the matter of finding the property is a vital one to the customer, the problem arises as to what constitutes an identification of the customer's securities.

Securities (1) may be held by the broker or (2) they may have been pledged with a bank or banker as security for a loan to the broker. If they are held by the broker at the time of failure, identification may be made in the following ways:

1. When stocks held by the broker are shown to be the identical certificates deposited for safe-keeping by a customer or held by the broker after executing an order for the customer whether on margin or for full payment.

2. Where certain stocks are shown to have been carried by the broker for his customer though the certificates are not identical with those originally deposited or purchased.

3. When it is found that stocks of the same kind are carried in an amount sufficient to meet all customers' claims and the claims of the brokerage firm it is considered evident that such stock was carried to satisfy all claims and each customer has a

right to his quota of shares of stock, upon paying any balance still due on the stock.

4. When stocks carried as in number three are sufficient to satisfy all the customers' claims but are not held in an amount to satisfy customers' claims and also those of the firm then the customers are entitled to the stock unless it is shown that certain shares were held specifically for the firm or its members. In this case the specific claims are first satisfied, and if the remaining stock is not sufficient to satisfy all the customers the stock is distributed among them pro rata on payment by them of the balance due. If the stock held in the block is not sufficient to satisfy all customers' claims then such stock shall be distributed pro rata among the customers who have claims for the particular stock represented in the block. In the case of stocks pledged by a broker with a bank or banker, identification is sufficient when the stocks can be traced to the bank or banker as in tracing trust funds.

The process of tracing and identifying money funds is subject to the same principles as those that apply to securities. Funds deposited by a customer awaiting the purchase of securities, or funds resulting from a sale of securities, when deposited in a bank and remaining there at the date of the assignment may be claimed by the customer. If the broker has mingled the customer's funds with his own and deposited them to his own account in a bank, the customer may claim such funds as are on deposit. The principle involved is that the broker withdraws his own funds and funds remaining belong to the customer.

SECURITIES IN A PREFERENTIAL POSITION

1. When securities can be traced and identified customers can claim them, but if not they go into the hands of the assignee for the general creditors.

2. When securities held for safe-keeping or in any other way are unlawfully mingled and unlawfully pledged with securities held in a customer's margin account and unlawfully pledged, then in case of insolvency the owners of securities unlawfully pledged have a preference over those

whose securities have been lawfully pledged and their claims must be satisfied before any other claims can be allowed.

CONDITIONS OF POSSESSION

1. Stocks in the hands of the insolvent broker or firm, after identification, go to the owner on his payment of any balance due the broker from the customer. Stocks that have been deposited for safe-keeping or for sale or have been purchased and paid for go immediately to the owner.

2. Securities that have been pledged with a bank or banker, after identification and after the bank's claims have been paid, go to the owners pro rata when there are none but ordinary claims. If preferred claims exist, then the proceeds, after the bank's demands are paid, go first to satisfy the preferred claims and any amounts remaining are distributed pro rata to the holders of ordinary claims.[9]

THE BROKER'S REPORTS OF TRANSACTIONS

It is customary for brokers, especially members of the New York Stock Exchange, to make such reports to their customers as will keep them fully informed as to their relations with their brokers. In the first place, a broker at the end of the day's business sends out a confirmation of all orders to buy or to sell including stop orders received during the day. In the second place, he sends out a notice of the number of shares of stock sold for each customer with the price, commission, tax, and the credit to the customer's account. A separate notice of buying orders is also sent out to each customer, giving the number of shares of each stock bought, the price, the commission, and the debit to the customer's account. The broker must keep a record with whom

[9] On the subject of customers' rights, see Campbell, Douglas, *The Law of Stockbrokers,* chap. vi: Dos Passos, J. R., *Treatise on the Law of Stock Brokers and Stock Exchanges,* Vol. 1, pp. 218-265; Goldman, Samuel, P., *A Handbook of Stock Exchange Laws,* pp. 107-111; Huebner, S. S., *The Stock Market,* chap. xxv.

each transaction took place and within 48 hours after request supply such information to his customer. If Smith orders 100 shares of United States Steel sold at the market, and the broker sells the stock at 115 to Jones & Company, Smith has the right to be informed as to who bought the stock and at what price.

The third type of notice has to do with ex-dividend and ex-rights dates of stocks for which they have limited orders to buy or sell. If Smith has with his broker an open order to buy Baldwin Locomotive at 110 and in a few days Baldwin will sell ex-dividend $1.75, the broker will inform his customer that on the day that Baldwin sells ex-dividend the order to buy will be adjusted to 108¼. If the customer is not agreed he can so inform his broker. If the order were a selling order the procedure would be the same.

It is also customary for the broker to render a monthly statement of account. Such statements are made up as of the close of business on the last day of the month. They give an itemized report of all buying and selling transactions, of all cash or securities received or delivered, of commissions charged, of interest due, of taxes paid during the month and the debit or credit balance and the stocks held by the broker or, perhaps, the stocks on which the customer is short at the close of business the last day of the month. The forms used differ with different firms. Some firms still use the balance-sheet type with the debits on one side and the credits on the other side of the sheet; others use a more modern form.

In the accompanying statement the broker has charged interest at the rate of 6% on debit balances and allowed 4% on credit balances. It must be noted that a credit received as the result of a short sale does not affect the balance on which interest is computed; nor does the debit due to the purchase of stock to cover the short sale affect this balance except by the amount of profit or loss made on the short sale transaction as a whole.

IF THIS ACCOUNT IS NOT CORRECT PLEASE RETURN IMMEDIATELY

BLANK & CO.

MONTHLY STATEMENT

KEEP THIS STATEMENT FOR INCOME TAX PURPOSES

John Jones

520 N. Third Street

Columbus, Ohio

DATE		BOUGHT OR RECEIVED	SOLD OR DELIVERED	STOCK OR BOND	PRICE	DEBITS AGAINST YOU	CREDITS TO YOU	BALANCES DEBIT	BALANCES CREDIT	DATE	INTEREST ADJUSTMENT	INTEREST DAYS	INTEREST DR.	INTEREST CR.
1926														
June	1			Check			2,500.00		2,500.00	1	CR. 2,500	11		4.68
	8	30		Union Pacific	Rec'd					8				
	12	100		Famous Players	120	12,025.00		9,525.00		12	9,525	6	9.53	
	15		100	U. S. Steel	140		13,971.00		4,446.00	15				
	18		100	Famous Players	123		12,271.00		16,717.00	18	CR. 2,746	3		1.37
	21			Div. U. S. Steel		175.00			16,542.00	21				
	21			Div. U. Pacific			125.00		16,667.00	21	CR. 2,696	4		1.80
	25	100		Gen. Motors	140	14,025.00			2,642.00	25	11,329	1	1.89	
	26	100		U. S. Steel	138	13,825.00		11,183.00		26	11,183	4	7.46	
	30			Interest to date	6	14.96		11,197.96					18.88	7.85
													3.92	3.92
July	1			Balance				11,197.96					14.96	
		30		Union Pacific										
		100		Gen. Motors										

Figure 4: Monthly statement.

It must also be noted that the account of the customer is charged with the amount of dividend paid by the broker to the lender of stock for delivery on a short sale. If the customer is short of a given stock on the day on which it sells ex-dividend, his broker will be called upon to pay the dividend on the day the dividend is payable.

THE MORAL RELATIONS OF BROKER AND CUSTOMER

The broker should be interested in raising the standard of the brokerage business and in educating the community in the science and art of investment. While it is not the province of the broker to decide whether the customer shall buy this or that security, nevertheless he should make his influence constantly felt on the side of the careful, intelligent use of funds. He should point out the risks as well as the attractive points in the several stocks; should insist on safe margins; should not permit the customer to overbuy or oversell and should show the customer the best methods to build up his credit standing with the firm and in the community. These moral obligations put the broker in a critical position in relation to his customer. The rules of the Stock Exchange require the broker to execute the customer's order as it is given by him. On the other hand, the broker knows that the customer is often inexperienced, is acting without proper investigation, has been influenced by interested parties, or is simply taking a chance. If the broker advises the customer, later he may find the customer censuring him as incompetent; if he does not advise him, and the customer loses then the customer will take his business to another house because he feels the first broker did not take the proper interest in him. A member must not make a practice of taking a position on the market opposite to that of the customer so that when the customer buys stock the broker sells short and when the customer sells the broker buys. Section 10, Chapter XII, of the Rules of the Exchange is very explicit on this point. No member may be

associated directly or indirectly with "any organization, firm, or individual engaged in purchasing or selling securities for customers and making a practice of taking the side of the market opposite to the side taken by customers."

A member must not buy from or sell to his customer securities in which such member is directly or indirectly interested without the customer's full knowledge and consent.

He must not make any unreasonable charges of any kind, and he is expected to give the customer the benefit of any transactions made at a price better than the customer's order called for. The broker has a perfect right to make a reasonable charge for collecting dividends on shares held on margin and for arranging loans for his customers but he seldom does so.

The broker must not intentionally make any false statement as to the facts about any stock or its value either orally or by mail or in an advertisement. Nor may he make a false statement of any transaction executed for his customer. All such acts of intentional falsehood are held by many states as felony punishable by a fine or imprisonment or both.

The Stock Exchange completely supervises the advertising of members. A member desiring to publish any advertisement, except the mere statement of the firm's name and business, must first obtain the consent of the Committee on Business Conduct. This committee has approved a general form which amounts to little more than a business card with a picture of the Stock Exchange building.

The general principle which sets the standard of every member's advertising and according to which all the committee's decisions are made is stated in section one of Chapter VIII of the Rules of the Exchange, as follows: "No member shall publish an advertisement of other than a strictly legitimate business character." This principle is conservatively interpreted by the Committee on Business Conduct and all the "high-power" type of advertising is eliminated.

Advertising by wireless is strictly limited by section 8 of

Chapter XIII of the Rules of the Exchange. "No member shall make use of wireless to transmit or broadcast information or forecasts of business or financial conditions or for any advertising purpose, or to stimulate interest in particular securities or in the market; provided, however, that members may supply quotations to broadcasting stations which have been approved by the Committee on Quotations and Commissions at such intervals and under such regulations as are prescribed by said Committee."

The customer, on his part, should not expect too much from his broker. Brokers are fallible in their judgment as well as other men and may not always interpret the market correctly. It is the broker's business to supply information and give efficient service, but it is not his business to make decisions for customers as to what they shall buy or sell.

Again, a customer should not ask his broker to carry him on a small margin. Rather he should appreciate a broker who does not allow him to overtrade but insists on ample margins.

Furthermore, the customer should take his broker into his confidence, should deal with him squarely, should aim to build up his credit on a sound basis and should strive to make his account worth while to the broker.

VI

THE NEW YORK STOCK EXCHANGE AND OTHER STOCK MARKETS

Brief history of the New York Stock Exchange. The formation period. The middle period. The modern period. The organization of the Stock Exchange. Membership. A seat on the Exchange. The government of the Stock Exchange. The volume of trading on the Exchange. The New York Curb Market. Organization. Membership. Listing requirements. Methods of trading on the Curb Market. Stocks traded on the Curb. The Consolidated Stock Exchange: securities traded on the floor; relations with the Stock Exchange; recent history.

We are not here primarily interested in the New York Stock Exchange, as such. However, since it is the dominant institution in the market for securities, no one can hope to understand the fundamentals of the market without a fairly comprehensive knowledge of the development and present organization of the Exchange. This chapter aims, first, to give a brief history of the development of the Stock Exchange, second, its present organization, and third, a brief description of the Curb Market and the Consolidated Stock Exchange.

BRIEF HISTORY OF THE NEW YORK STOCK EXCHANGE

Two hundred years ago, in 1726, the Paris Bourse was founded. Forty-seven years later the London Stock Exchange was organized. Previous to these dates there had been in Paris and London a long period of unorganized or partially organized stock brokerage business. It is said that the history of the "Change de Paris" may be traced to the beginning of the fourteenth century and that, in England, for more than a century before the London Stock Exchange was organized, the stock brokerage business was flourishing.

In the United States the period of development preceding the formation of an organized market occupies much less time than in France or England. One would expect this to be true because many of the instruments and much of the technique of an organized market were ready for use when the Philadelphia and New York stock brokerage business began. All the results of French and English experience were available and could be utilized in the working out of the problems involved in our own methods of financing the government, on the one hand, and business, industrial and financial institutions, on the other.

Philadelphia was the early commercial and financial center of this country. Here was located the center of government; here in 1781 was founded the Bank of North America and, 10 years later, the First Bank of the United States; here, too, within the first decade of the nineteenth century, was founded the first organized stock market in the United States. Matthew McConnell was its first president.[1]

The next few decades put New York into first place in industry, commerce, and finance. With the progress in these fields, the stock market in New York kept pace and soon surpassed that in Philadelphia. One of the purposes of this chapter is to trace briefly the development of the New York Stock Exchange.

THE FORMATION PERIOD

Before stock trading could become a business there had to come into existence stocks of several issues and in considerable amounts. The Bank of North America, founded in 1781, was capitalized at $400,000, raised three years later to $2,000,000; in 1784 the Bank of New York was established; and in 1791 the First Bank of the United States was chartered with a capital of $10,000,000 consisting of 25,000 shares. Congress by spring of 1790 had passed an act refunding the national debt of over 56 millions at par. There

[1] Pratt, S. S., *The Work of Wall Street*, p. 9.

had been very active speculation in the old certificates of indebtedness. These were now paid with the stocks (bonds) of the United States Government. A second act passed by Congress, 1790, provided for the assumption by the general government of the state debts. The refunding of the state debts was spread over about five years. The total amount of bonds issued by the general government, including both the national and the assumed state debts, amounted to $77,500,000.[2]

These securities were traded in early on Wall Street and the stocks of the Bank of North America, the First Bank of the United States, and the United States government were quoted regularly by brokers in 1792. The usual meeting place of these brokers was under a buttonwood tree at 68 Wall Street.

The first definite step toward organization of the activities of stock brokers came in May, 1792, when 24 brokers who made it a practice to give their services on a commission basis met at Corre's Hotel and pledged themselves "not to buy or sell from this day for any person whatsoever, any kind of public stock at a less rate than one quarter per cent commission on the specie value and that we will give a preference for each other in our negotiations.[3]

After 1792 the development of banking went on rapidly. One of the noteworthy banks organized at this time was the Bank of the Manhattan Company in which Aaron Burr was largely interested. Insurance companies, both fire and marine, had been organized and their stocks were on the market. The First Bank of the United States was not rechartered but the Second chartered in 1816 was capitalized at 35 millions as compared with 10 millions in the case of the First Bank. The War of 1812 added many millions to the debt of the general government.

The large amounts of stock thus outstanding and on the market together with the appetite of the public for specula-

[2] Bassett, J. H., *A Short History of the United States*, p. 260.

[3] Martin, H. S., *The New York Stock Exchange*, p. 36.

tion made it advisable to organize the brokers into an exchange. Soon after the organization of the exchange the stocks of 13 insurance companies, 10 banks, besides a number of issues of government securities, were traded in by its members.

The market for securities thus grew from small beginnings in response to a demand from investors and speculators. Moreover, the development of stock certificates which represent the public debt or shares in the ownership of the assets of corporations was the forerunner of the stock market. The market, however, was needed as a means to an adequate distribution of the securities issued, to make securities more liquid and to attract funds that otherwise would not come into the security market.

THE MIDDLE PERIOD

With the multiplication of stocks and bonds, the increasing number of brokers on the street and the enlarging interest of the public in the market for securities, the agreement made in 1792 was no longer adequate to maintain among brokers a sense of responsibility both to the public and to their fellow operators. A more closely knit organization was needed and in 1817 the brokers formed an association and adopted a constitution and by-laws. Quarters were rented at 40 Wall Street for about $100 per year, and the market place, until then out-of-doors, was moved to the new quarters. The association adopted as its name the New York Stock and Exchange Board.

In 1820 the constitution of the Exchange was revised. At this early date wash sales were prohibited. It was also found necessary to set specific rates of commission for the different types of bonds and stocks traded on the market.

The next two decades saw a great development in canal building and railroad construction. In 1821 the Morris Canal stock was sold to the public and in 1830 the stock of the Mohawk and Hudson Railroad was listed for trading.

The first corner recorded was in Morris Canal stock in 1835. The two years preceding the panic of 1837 were full of surprises, rumors, and scandal. Some time after the Morris Canal corner over nine times as many shares of Harlem Railroad were sold as had been issued. The Exchange appointed a committee to investigate cornering and selling for future delivery. The market broke in October, 1836. By the middle of the year sales had reached approximately 8,000 shares per day. This figure was considered very unusual by the press at that time.

Trading was occupied for the most part with government, bank, canal, insurance, and public utility securities until about 1835, when the railroads took the lead which they held until 1913. The *New York Herald* on May 13, 1835, reports the sales at the Stock Exchange at 3,631 shares, of which 3,160 were rails.[4]

As the agriculture, business, and industry of the country fared so fared the stock market. Its growth represented the country's growth. The invention of the telegraph in 1842 made possible close contacts between the market and the business and industry of the whole nation. The panic of 1857 had its counterpart in the stock market; the uncertainties of the Civil War were accompanied by wild speculation; the depreciation of the currency led to the "Gold Conspiracy" and Black Friday.

During the Civil War, speculation was so extensive that many speculators spent the day at the Exchange and the evening at the Fifth Avenue Hotel buying and selling. Many traders attempted to become members of the Exchange but could not gain admittance because of the exclusive character of the membership. These men organized a more liberal association, called the Open Board of Brokers, in 1864. The same year a Gold Exchange to trade in gold was formed.

The outstanding speculative event in the history of the Gold Exchange was Black Friday, September 24, 1869. The

[4] Pratt, S. S., *The Work of Wall Street,* (third edition) p. 13.

country had been on a paper basis with gold at a premium for several years. The fluctuations in the gold price of paper money caused much speculation in gold. Congress had made laws aimed to restrict speculation in gold but this resulted only in a higher premium and did not stop speculation. The restrictions were repealed in 1864. Gold dealers were now free to establish an organized market for gold. This exchange functioned until 1877 when it was dissolved.

It was during the year 1869 that Jay Gould and James Fisk attempted to engineer a corner on gold. Gould had employed more than two score brokers; a pool had been formed to put up gold, and President Grant had been lavishly entertained and carefully instructed as to the desirability of maintaining a relatively high premium on gold for the good of the export business, of the country in genereal, and of the farmer in particular. Gold was put up from 132. It was Gould and Fisk's plan to buy all the gold available. On September 24, Gould and Fisk's brokers were instructed to buy all the gold in sight. Gold was run up to 162½ when Grant learned what was happening and instructed the treasury to sell gold. This burst the bubble and men wildly scrambled to sell gold which tumbled in a crash to 133. The gold transactions of the day amounted to well over four hundred millions of dollars. Losses were tremendous. Many brokerage houses failed.

Not only in gold was there irresponsible speculation and gambling, but the same type of thing was going on throughout the field of stocks. The twenty years ending with 1872 were years of struggle between Daniel Drew, Commodore Vanderbilt, Jay Gould, and James Fisk for domination of the Harlem, the Hudson, the Erie, and the New York Central railroads. Courts were bribed, legislatures were bought, trickery of the most subtle kind was employed, stock was watered, railroads were milked. It was the day of the freebooter in big business and in the stock market.

THE MODERN PERIOD

The Open Board of Brokers operated as a distinct exchange for about fifteen years until 1869, when it was consolidated with the New York Stock Exchange. The Exchange now owned its own building, having erected a small structure in 1865 on the site still occupied by the older part of its present large quarters.

The Atlantic cable had been laid in 1866 and arbitrage between New York and London had grown to some importance. It may be said that the panic of 1873 marks the beginning of the modern period of the New York Stock Exchange. It was now a permanent institution in the business life of the nation. Its purpose was to furnish an open, free market to its members and to guard against anything that might be considered against its interests or that of its members especially considered from the long time point of view. Along these lines much progress has been made. High standards of business morality have been developed, and practices only recently winked at are now severely dealt with.

It may be said that reforms have not always been willingly made but are the result of criticism by the public and fear of drastic action on the part of the state and national governments. It is to be hoped that the time will never come when the pressure of public opinion will not be felt keenly by the authorities of the Exchange. Constructive criticism backed by the full force of public opinion is needed here as elsewhere and it is to the public interest that such criticism should always be forthcoming.

THE ORGANIZATION OF THE STOCK EXCHANGE

The Stock Exchange is a voluntary association of 1,100 members for the purpose of providing themselves a free and carefully regulated market place for the purchase and sale of securities. The Exchange is neither a partnership nor

a corporation. It has a constitution and by-laws but no charter. The association has no capital and has issued no property rights of any kind to its members. The Exchange is unlike a partnership in that the death, withdrawal, or removal of a member does not affect its life.

Each member voluntarily enters the association by its permission, and since he acquires no profit rights in the association and since the association has asked no special favors from the state and has received none, it has the right to discipline and expel its members as it sees fit.

Because of the nature of the Exchange the courts have held that its business does not become "affected with a public interest" as that of a corporation that deals largely with the public. For this reason the Exchange has always been protected in its rights to use its own discretion as to membership and as to granting or withholding any of its services and privileges. For example, the Stock Exchange may grant the use of its quotation service to whom it sees fit and may withhold the service when it no longer deems it wise to allow such privilege.

The Hughes Commission came to the following conclusion: "We have been strongly urged to recommend that the Exchange be incorporated in order to bring it more completely under the authority and supervision of the State and the process of the courts. Under existing conditions, being a voluntary organization, it has almost unlimited power over the conduct of its members, and it can subject them to instant discipline for wrongdoing, which it could not exercise in a summary manner if it were an incorporated body. . . . The submission of such questions to the courts would involve delays and technical obstacles which would impair discipline without securing any greater measure of substantial justice. While this committee is not entirely in accord on this point, no member is yet prepared to advocate the incorporation of the Exchange and a majority of us advise against it, upon the ground that the advantages to be gained by incorporation may be accomplished by rules

of the Exchange and by statutes aimed directly at the evils which need correction."

Four years later the Pujo Committee, after investigating the practices of the Exchange, advised in favor of incorporation in the state in which it is located. The committee held that the contention of the Exchange that it is not "engaged in business and that its sole function is to supply a meeting place where its members may deal with one another under prescribed rules" was at variance with the facts. Moreover, the committee asserted that "it is incongruous that such an institution wielding such power and equipped to perform such useful and important functions in our economic system should be uncontrolled by law."[5]

The building in which the Stock Exchange meets is owned by a corporation whose shares are all owned by the Exchange. The Exchange also owns the entire stock of the New York Quotation Company which supplies the ticker service to members in lower New York City. The Gold and Stock Telegraph Company, a subsidiary of the Western Union Telegraph Company, pays the Exchange a contract price for the right to provide a ticker service to its customers throughout the world. The Exchange, however, reserves the right to determine who may or may not receive the service. The purpose of this monopoly on the quotation service is claimed to be the best method to protect the public against the bucket-shop and fraud.

MEMBERSHIP

The membership has been limited to 1,100 since 1879. Since that time the business of the Exchange has multiplied several times, but the membership has not been increased. Admission to membership is possible only by purchase of a "seat" from some member or by admission to a vacancy. In October, 1925, the Governing Committee submitted a

[5] *Report of the Committee Appointed Pursuant to House Resolutions 429 and 504 to Investigate the Concentration of Control of Money and Credit*, 1913, pp. 114-115.

proposal to increase the membership from 1,100 to 1,125, but the members voted against the proposal by a safe majority. During the year 1925, 84 transfers of membership took place. The highest price paid for a membership was $150,000. During the same year 16 members died and one member was expelled.

The Committee on Admissions passes on each application for membership. Two-thirds of the members of the committee must favor the applicant. The applicant to be eligible must be a citizen of the United States, 21 years of age, and in good health. He must have written recommendations as to his character from three persons of some note and must be sponsored by two members of the Exchange who have been personally acquainted with him for two years or more. The applicant's financial affairs are carefully examined to see that he is solvent and free from judgments. No debt may be incurred for the purpose of purchasing a membership. Any funds received from a source other than the applicant's own resources must be considered a gift and never permitted to lapse into a debt. A membership cannot be bought by a firm; only a private individual may hold a membership.[6]

Each new member shall pay an initiation fee of $4,000 and dues as determined by the Governing Committee, but not to exceed $1,000 annually. Besides these fees, which take care of both the current and capital expenditures, the Exchange requires each member to pay $10 at initiation to a gratuity fund and to pledge himself for the period of his membership to make a voluntary gift of $10 to the family of any member at his death. The Exchange pledges itself to pay to the beneficiaries of a deceased member $10,000 out of the fund thus collected.

A SEAT ON THE EXCHANGE

The term "seat" had its origin years ago when members

[6] *Constitution of the New York Stock Exchange*, 1925, Article XII.

had desks at which they sat and transacted business. Now the variety of stocks traded in, the size of the active membership, and the volume of business done requires much activity on the part of members on the floor and seats are no longer a convenience. A "seat" today means a membership. It can be bought and sold but only with the consent of the Committee on Admissions. In the case of the decease of a member, the Committee sells his seat, and after paying any claims which members or the Exchange may have against him the proceeds are paid into his estate. The Exchange and its members have a first lien on a member's seat and in case of bankruptcy come in ahead of his other creditors for any funds accruing from the sale of the seat. Thus, while the seat is the property of the member yet it is not his property absolutely because the Exchange reserves certain rights in the seat. The courts have consistently upheld the Exchanges in their contention that their members are in the position of prior claimants in case of default of a member.

The price paid for seats has varied from $500 in the sixties to $185,000 in 1926. Table 14, taken from the *Wall Street Journal,* shows the high and low prices of seats on the Stock Exchange for the last 55 years.

Prices paid for seats vary with the activity of the stock market. When prices are rising rapidly with a large volume of purchases in a bull market, seats are in demand at a rising price. The opposite conditions in the stock market bring a slackening demand for seats and falling prices.

Again, the yearly spread between the high and low is noteworthy. In the last seven years since the World War the percentage of the high price of the year over the low price of the same year was as high as 83% in 1919 and as low as 22% in 1922. The high price of 1925 was 51% above the low of the year.

A membership on the Exchange has many advantages. The prestige that attaches to membership brings its rewards in many ways. The member can do his own trading with-

TABLE 14

STOCK EXCHANGE SEAT SALES, 1871 to 1925

Year	High	Low	Year	High	Low
1925	$150,000	$99,000	1897	$22,000	$15,000
1924	101,000	76,000	1896	20,000	14,000
1923	100,000	76,000	1895	20,000	17,000
1922	100,000	88,000	1894	21,250	18,000
1921	100,000	79,000	1893	20,000	15,250
1920	115,000	77,500	1892	22,000	17,000
1919	110,000	60,000	1891	24,000	16,000
1918	68,000	49,000	1890	22,500	17,000
1917	70,000	45,000	1889	23,000	19,000
1916	76,000	60,000	1888	24,000	17,000
1915	74,000	38,000	1887	30,000	19,000
1914	55,000	34,000	1886	33,000	23,000
1913	53,000	37,000	1885	34,000	20,000
1912	74,000	55,000	1884	27,000	20,000
1911	73,000	65,000	1883	30,000	23,000
1910	94,000	65,000	1882	32,500	20,000
1909	94,000	73,000	1881	30,000	32,000
1908	80,000	51,000	1880	26,000	14,000
1907	88,000	51,000	1879	16,000	5,100
1906	95,000	78,000	1878	9,500	4,000
1905	95,000	72,000	1877	7,750	4,500
1904	81,000	57,000	1876	5,600	4,000
1903	82,000	51,000	1875	6,750	4,250
1902	81,000	65,000	1874	5,000	4,250
1901	80,000	49,500	1873	7,700	5,000
1900	47,500	37,500	1872	6,000	4,300
1899	40,000	29,500	1871	4,500	2,750
1898	29,750	19,000			

out commission charges and can secure the services of other members at a rate much below that charged non-members.

When it is noted that in 1914 seats ranged in price between $34,000 and $55,000 and that as late as 1918 the range was $49,000 to $68,000, the attractiveness of a seat as an investment is readily apparent, regardless of the advantages above mentioned.

THE GOVERNMENT OF THE STOCK EXCHANGE

The Exchange has no charter prescribing what it may or may not do or determining methods of organization. Being a private voluntary association with indeterminate life, it

was thought wise at its beginning to prescribe, in a written constitution and by-laws on the one hand, what members may and may not do and, on the other hand, the organization which shall see that members shall be protected in their rights and disciplined for violations of principles and rules deemed necessary to the best interests of the membership. Experience has taught many lessons which have from time to time been incorporated in the constitution and by-laws until at the present time the Exchange has developed a machinery of government that is highly effective.

Most stock exchanges throughout the country have modeled their organization upon that of the New York Exchange. Their machinery of government is essentially the same as that of the Exchange.

1. *The Governing Committee.* The government of the Exchange is in the hands of a Governing Committee composed of the president, the treasurer, and 40 members of the Exchange. The president and the treasurer are elected annually by the members. The other 40 members of the Governing Committee are divided into 4 classes of 10 members each. Members are elected to hold office for 4 years, and each year the term of office of one class expires. Each year, therefore, 10 members of the Governing Committee, as well as the president and treasurer, are elected. There are also a vice-president, a secretary, an assistant to the president, an assistant treasurer, assistant secretaries, an accountant, and an economist. The Governing Committee is "vested with all powers necessary for the government of the Exchange, the regulation of the business conduct of its members, and the promotion of its welfare, objects and purposes." This committee is, therefore, the all-powerful governing force in the Exchange.

The Governing Committee appoints 12 standing committees from its own members, and to these committees are assigned the problems that regularly come before the Exchange. Special problems are assigned to temporary com-

mittees also appointed by the Governing Committee. There is also a Nominating Committee elected by the membership directly, as are the president and treasurer.

2. *Standing Committees.* The old constitution provided for 13 standing committees, but the new constitution provides for but 12. These committees are as follows:

(*a*) *A Committee on Admissions.* All applications for admission or readmission or reinstatement after suspension are handled by this committee, consisting of 15 members. The committee's favorable action on these questions requires the affirmative vote of at least 10 members.

(*b*) *An Arbitration Committee.* Differences arising out of members' contracts with members of the Exchange or firms registered on the Exchange shall be brought before this committee consisting of 9 members. Any matters of difference between members and non-members may also be heard at the instance of the non-member. The decisions of the committee are final except that a member of the committee may make an appeal to the Governing Committee or that when more than $2,500 is involved one of the parties to the dispute may within 10 days appeal directly to the Governing Committee.

(*c*) *A Committee of Arrangements.* The care of the floor of the Exchange, who shall and who shall not be allowed on the floor, supplies for the Exchange, control of telegraph, telephone, wireless, and messenger service, making of rules for the facilitation of the business of the Exchange and enforcing these rules, consideration of complaints and arrangements for the annual elections are in the province of this committee composed of 7 members.

(*d*) *A Committee on Business Conduct.* These five members consider the financial condition of members of the Exchange, watch the conduct of business on the floor, examine into the condition of customers' accounts of members and keep close scrutiny on the business conduct of members generally.

(*e*) *A Committee on Constitution.* Five members constitute this committee. Their function is to receive and consider all proposals as to amendments of the constitution.

(*f*) *A Finance Committee.* To 7 members of the exchange are assigned the problems of the financial policy, the making of a budget and the examination of the books of the Exchange. In short, the Exchange's own finances are the province of this Committee.

(*g*) *A Law Committee.* All matters of law affecting the interests of the Exchange come into the purview of the 5 members constituting this committee. It may, at its own discretion, examine into the business conduct of any member.

(*h*) *A Committee on Odd Lots and Specialists.* This committee of 5 members has general supervision over dealings in odd lots of stock and the business and methods of all specialists. It makes recommendations to the Governing Committee and enforces observance of the Governing Committee's rulings.

(*i*) *A Committee on Publicity.* To these 5 members is assigned the task of keeping the public informed as to the work and function of the Exchange.

(*j*) *A Committee on Quotations and Commissions.* The Exchange's ruling regarding commission charges between members, between members and non-members, charges in the case of foreign joint-account arbitrage, and so forth, must be enforced. The collection and distribution of quotations to members and non-members raises many problems and must be carefully managed. Information must not be allowed to go into hands that misuse it. The Committee on Quotations and Commissions is composed of 9 members. It has done much since the World War to raise the standard of the houses receiving stock quotations.

(*k*) *A Committee on Securities.* This committee, consisting of 5 members, makes the rules relating to the delivery of securities, to the deposits on contracts, to due-bills, and to contracts for future delivery of securities.

(*l*) *A Committee on Stock List.* This committee, composed of 5 members, prescribes the requirements for listing of securities, receives application for listing and passes upon them, admits to the list certificates of deposit, interim receipts, and temporary securities. It also permits dealing in securities on a "when issued" basis. It prohibits dealing in securities which have matured and removes them from the list. Furthermore, it removes from the list securities whose outstanding amount has been so reduced that further trading in such securities is not advisable. The Governing Committee's approval must be obtained in all cases before any action can be taken by the Committee on Stock List except that the obligations of the United States, any state, county, or city, and the external dollar bonds of foreign governments may be listed without the Governing Committee's approval.

Besides the standing committees above named, special committees are named by the Board of Governors to in-

vestigate special problems and to make recommendations for action by the Board. Such committees continue their existence at the pleasure of the Board.

THE VOLUME OF TRADING ON THE EXCHANGE

The number of shares of stock sold in 1925 amounted to 452, 211,399. This compared with 312,875,250 shares sold in 1919, the largest previous year, and about 250,000,000 shares, the annual average for the last ten years. The bond sales of 1925 amounted to $3,398,346,045, par value, as compared to $4,098,696,027 par value in 1922, the highest of all time.

During 1925 two-million share days became a commonplace with 59 trading days at or above the 2,000,000 mark. Of these 59 days, 29 were consecutive. Until July 1, 1926, the records of sales show only eight three-million share days as follows: (1) April 30, 1901, 3,209,983 shares; (2) May 9, 1901, the day of the Northern Pacific corner, 3,336,-695 shares; (3) December 21, 1916, 3,048,925 shares; (4) November 10, 1925, 3,448,747 shares; (5) November 13, 1925, 3,024,449 shares; (6) March 2, 1926, 3,031,173; (7) March 3, 1926, 3,786,111 shares; and (8) March 30, 1926, 3,297,901.

For many years the rails dominated the market but with the rapid development of the great industrials and the regulation of the railroads the industrial stocks have been dominant since 1913. In 1895 the shares sold stood 52.9% rails and 47.0% industrials. The gap then widened until 1902, when 75% of all shares sold were rails. The turning point had come, and since then the industrials have rapidly gained on the rails until the sales of industrials for 1925 amounted to 85.12% of the total sales for the year

In Figure 5 is given in graphic form the relative position of sales of rails and industrials on the New York Stock Exchange, 1895 to 1925.[7]

[7] Data taken from the *Wall Street Journal*, January 6, 1926.

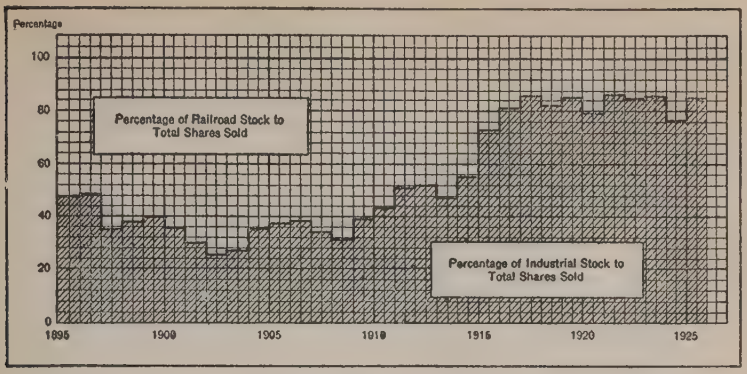


Figure 5: Relative sales of railroad and industrial shares on the New York Stock Exchange, 1895-1925.

THE NEW YORK CURB MARKET

The New York Curb Market is the second largest stock exchange in America. Like the London Stock Exchange and later the New York Stock Exchange, the Curb Market began out of doors and just as both of the great exchanges finally sought more comfortable and convenient quarters by going inside so the Curb Market, as it grew older and more respectable, has withdrawn itself into large and comfortable quarters in its own new building at 78 Trinity Place.

The Old Curb Market. No one agrees as to the date when trading began on the Curb. During the Civil War the crowd of brokers met in Williams Street but later moved to Broad Street, where it did its trading until June 27, 1921, when it moved to its new building.

For many years there was little or no organization. The report of the Hughes Commission in 1909 so severely criticized the frauds practiced on the Curb and so strongly recommended reformation that it was felt that something must be done.[8] The result was the formation of an organization called the New York Curb Association in 1910. Since

[8] Van Antwerp, W. C., *The Stock Exchange from Within,* Appendix, pp. 432-434.

that time there has been a persistent determination to eliminate crooked practices and to require high standards. A Board of Representatives consisting of 15 members formed the governing body of the Curb. Before moving to its new quarters the association had about 550 members and memberships were selling at from $5,000 to $7,000 each.[9]

The members of the Curb transacted business in good weather and bad in the open street. Writing in the *New Republic* as late as August 18, 1920, A. G. Gardiner described the Curb trading thus: "In the street a jostling mass of human beings, fantastically garbed, wearing many-colored caps like jockeys or pantaloons, their heads thrown back, their arms extended high as if in prayer to some heathen deity, their fingers working with frantic symbols, their voices crying in agonized frenzy, and at a hundred windows in the great buildings on either side of the street little groups of men and women gesticulated back as wildly to the mob below. It is the outside market of Mammon."

It was in this market that many of the brokers now holding seats in the New York Stock Exchange went to school and got their initial training. It was also in this market that many of the stocks now listed on the Big Board were groomed and developed.

The New Curb Market. With the completion of its new building in 1921 the Curb Market began a new stage in its development. The organization of the market has taken on a compactness and definiteness that was lacking before. The new building, representing an investment of $2,250,000, provides ample office room, a floor 92 feet by 104 feet with 16 posts where stocks are traded in, 4 large annunciator boards, telephone booths, and a large visitors' gallery.

ORGANIZATION

The organization of the Curb Market is similar to that of the New York Stock Exchange. The government of the

[9] Pratt, S. S., *The Work of Wall Street*, p. 202.

exchange is vested in a Board of Governors consisting of 24 regular members. This board selects from its members a president, vice-president, and treasurer. It appoints all committees, a secretary, and an assistant secretary. The standing committees are as follows: (1) Finance, (2) Commissions, (3) Membership, (4) Listing and Securities, (5) Complaint, (6) Arbitration, (7) Law, (8) Constitution, (9) Arrangements, (10) Insolvencies, (11) Quotations, (12) Clearing-house, and (13) Nominations. All committees are responsible to the Board of Governors, which has final authority on all matters of the exchange.

MEMBERSHIP

There are two classes of members, regular and associate. There are about 550 regular members and nearly the same number of associate members. Regular members pay an initiation fee of $500, associate members, $250. Any person over 21 years of age engaged in the brokerage business may make application for an associate membership. The associate membership is composed largely of members of the New York Stock Exchange. Regular membership is transferable. In June, 1926, a membership sold for $33,000. Associate membership cannot be transferred. A regular member may by consent of the Membership Committee on the Board of Governors appoint a representative who shall trade on the floor for him. Associate members are not entitled to trade on the floor, but regular members charge them a commission much less than the commission to non-members.

Purposes of the Curb. The objects of the Curb shall be to furnish rooms and other facilities for convenient trading by its members and to "promote and investigate just and equitable principles of trade and integrity among its members."[10] The exchange provides: (1) a primary market for

[10] *Constitution of the New York Curb Market.* Article I.

introducing the securities of corporations which are eligible for listing under the listing requirements; (2) a temporary primary market for "rights"; (3) a market for speculative issues in the formative period of their corporate existence; (4) a market for such other stock and bonds as are not listed on any other exchange.

LISTING REQUIREMENTS

The theory underlying the listing requirements is the same as that of the New York Stock Exchange. The Curb attempts to prevent listing of securities which are fraudulent in their issue and to make available to its members all the information obtainable. The fact that a stock is very speculative is no necessary ban against its listing as long as the stock is not illegally issued or the result of a fraudulent promotion; provided, however, that the corporation give the relevant facts necessary to a judgment of the value of the stock.

Types of listing. Securities traded on the Curb Market may be, (1) unlisted, (2) temporarily listed, or (3) fully listed. The Committee on Listing and Securities admits seasoned securities on request of a member who is prepared to make a market for the securities he is sponsoring, provided: (1) that the bonds or stocks are traded in on some well-recognized stock exchange outside New York City, or "over the wires," and (2) that full information regarding the companies is given in Moody's or Poor's *Manuals* or the *Mines Handbook*. The committee also admits to unlisted trading, on a "when, as, and if issued" basis, new issues of companies whose securities are listed on the New York Stock Exchange.

Temporary listing is granted to new companies, provided: (1) they furnish certain preliminary facts and certified statements of assets and liabilities, earnings, and expenditures, and (2) the company agrees to make formal appli-

cation for full listing within 30 days from the date of the application for temporary listing.

For full or formal listing the Curb requires data on essentially the same general subjects as the Stock Exchange though the information required is not so searching. An income account and balance sheet must be published annually; a registrar and a transfer agent must be maintained in the Borough of Manhattan; the Listing Committee passes on the form of all stock certificates; notice of any proposed action regarding interest or dividends, increases or decreases in the number of shares of stock outstanding, and so forth, must be given the Curb promptly; at least 15% of the outstanding stock must be in the hands of the public, exclusive of directors, officers, agents, or syndicate managers.

Special schedules must be prepared giving the following information:

1. *Properties.* How acquired. By cash or stock and amounts of each?
2. *Unpaid stock subscriptions,* and stock sales agreements.
3. *Capital stock.* How issued and for what purpose? Amounts realized in detail.
4. *Earnings and expenses.* Complete detailed profit and loss statement or, in companies being developed, not yet in the productive stage, a statement of cash receipts and disbursements.
5. *Surplus.* How acquired. Paid in surplus must be clearly separated from earned surplus. A complete condensed analysis for a number of years is required.[11]

It must be remembered that although data on these vital subjects are asked for, the condition of the company itself may be very weak. For example, the Committee on Listing and Securities may accept mining and oil companies which are merely prospects. The committee, must, however, following its theory of publicity, classify companies in the prospect stage as "prospects" as compared to developed companies classified as "developed properties."

[11] See information sheet on *"Preparation of Documents to Be Submitted in Compliance with Listing Requirements,"* of the New York Curb Market.

No stock may be listed for trading which is listed on the New York Stock Exchange. Since members of the Stock Exchange may not trade on an exchange in New York City which lists stocks already listed on the Big Board, and since a very large part of the Curb's business comes from members of the Stock Exchange, the reason for the above rule of the Curb is evident.

METHODS OF TRADING ON THE CURB MARKET

1. The unit of trading in bonds is, as on the Big Board, $1,000 par value; stocks selling below 50 cents, 1,000 shares; and at or over this price, 100 shares.

2. Minimum spread between bid and asked—Securities selling under $1 shall be dealt in cents per share; at $1 to $5, in 1/16 of $1 per share; and at $5 and over in ⅛ of $1 per share. The minimum spread on bonds is ⅛ of 1%.

3. Time of delivery—Here the rules are the same as those of the New York Stock Exchange: cash, regular way, at three days, buyers' and sellers' option. Contracts falling due on holidays or half-holidays are settled the same as on the Big Exchange. Privileges are not allowed to be bought or sold on the floor.

STOCKS TRADED ON THE CURB

A count of the stocks traded in daily as reported in the *Wall Street Journal,* for example, will show that in a fairly active market there were sales in 200 to 350 issues of stocks and that 450,000 and more shares changed owners. There are many stocks of the best companies listed as a brief glance at the stock list will show. Among the oils are such as Standard Oil of New Yosk, Indiana, and Ohio; among public utilities are America Light and Traction, common and preferred, American Gas and Electric Midwest Utilities, New York Telephone preferred, Northern States Power, and others. In the industrial group very good stocks are

found. The approximate number of stocks on the Curb is 1,150, and of bonds, 235.

Again, new stocks are traded here. The New York Stock Exchange will not list new stocks. These come on the Curb and serve their probation period. Later they graduate to the Big Board. Among such stocks are, Air Reduction, Ajax Rubber, American International, American Safety Razor, Cerro de Pasco, Chili Copper, Fisher Body, General Asphalt, General Motors, Hupp Motors, Kelly-Springfield Tire, Kennecott Copper, Kresge, Loews, Incorporated, Marland Oil, May Department Stores, Miami Copper, Midvale Steel, Montgomery Ward & Company, Phillips Petroleum, Sinclair Oil, Standard Oil of New Jersey, United Alloy Steel, United Drug, United Retail Stores, Utah Copper, White Motors, and many others.

New stocks, rights, and warrants are traded "when, as, and if issued," thus making a market for these securities ahead of their actual issue. Such a market is of great advantage both to the selling syndicate and, in the case of stock dividends and "rights," to the stockholder. The syndicate can form an idea of the public appraisal of its client. The stockholder can get an estimate of the value of his share of the distribution by his company and can realize on it or can hold for investment or later sale.

The relation between the Curb and the New York Stock Exchange is one of cooperation instead of antagonism such as exists between the Stock Exchange and the Consolidated Exchange. The Curb supplements the Stock Exchange.

The Curb Market's bond list is of considerable importance, and sales each year amount to many millions of dollars. What has been said about stocks on the Curb applies essentially also to bonds.

THE CONSOLIDATED STOCK EXCHANGE

Organization. As its name implies, the Consolidated Stock Exchange is a consolidation of several exchanges that

had a separate existence before merging in 1886. The New York Mining Exchange about 1885 decided to trade in odd lots of railroad shares. This caused dissatisfaction on the part of a considerable number of members, who withdrew from the Exchange.

Following this reduction in its numbers the Mining Exchange took the lead in consolidating with three other exchanges in 1886. For a number of years after organization, trading in grain, petroleum, and other products took place, but by 1910 wheat was the only commodity traded in actively. Stocks, however, have occupied the major attention of traders from the beginning.

Securities traded on the floor. The authorities of the Consolidated Exchange at its inception saw the need of a primary market for odd lots. To this end the unit of trading was made 10 shares, and the stocks listed for trading were largely those already listed on the Big Exchange but there sold only in 100 share lots.

Besides the stocks listed on the Stock Exchange, other stocks, including certain mining stocks, generally excluded from other exchanges, were listed on meeting the listing requirements. Stocks listed on the Big Exchange might also be listed on the Little Exchange without any further formalities. The odd lot business has grown enormously and the Consolidated Exchange prospered accordingly.

Relations with the Stock Exchange. From the time the Little Exchange began trading in stocks listed on the Big Exchange relations have been strained. "The last named wages bitter warfare against the Consolidated for no other apparent reason than that the latter is a competitor. It has adopted and rigidly enforces a rule prohibiting any business transactions between its members and members of the Consolidated, and any communication by telegraph, telephone, messenger, or otherwise, directly or indirectly, between the places of business of its members and the places of busi-

ness of members of the Consolidated."[12] Article XVII, Section 6 of the revised constitution, June, 1925, continues the provision which prohibits members of the New York Stock Exchange from trading directly or indirectly or through a partner on any exchange in New York City in securities listed on the Stock Exchange.

The Consolidated Exchange had a somewhat larger membership than the Stock Exchange. Its methods of conducting business were on the whole similar to those of the Big Exchange, though there was much less control and discipline of its members. Settlements were made only once each week.

Recent history. Due to a number of failures of members of the Consolidated Exchange and alleged unlawful practices on the floor, an investigation was made by the state of New York, January, 1926. An injunction was issued closing the Exchange until reorganized. Many members favored liquidation and dissolution, others believed that the Consolidated had a real function to perform and finally prevailed. A reorganization plan with a new constitution was drawn up to the satisfaction of the District Attorney's office, and on March 30, after having been closed for some weeks, trading was continued but on a very small scale.

For over 10 years the Consolidated Exchange has occupied its own building at Broad and Beaver Streets. The most recent plans, July 1, 1926, call for the disposal of the building and the renting of smaller quarters.[13]

[12] *Report of the United States Banking and Currency Commission,* 1913, p. 37.

[13] For an account of the recent history of the Consolidated Exchange, see the *New York Times,* January 6, 7, 19, and March 30, 1926.

VII

THE LISTING OF SECURITIES ON THE NEW YORK STOCK EXCHANGE

The theory underlying listing requirements. General agreements required: (1) transfer and registry offices; (2) the engraving and form of certificates; (3) corporate publicity; (4) reports as to changes in issues of securities; (5) changes in the assets behind the securities; (6) notices to stockholders and bondholders. Detailed information required. Papers to be filed with application. The work of the committee on stock list. Mistaken notions concerning listed stocks. Value of listing to the investor. Value of listing to a corporation. Criticisms of listing requirements. Securities listed on the Stock Exchange.

Until 1910 the Exchange maintained a "listed" department and an "unlisted" department. In the unlisted department were carried securities of corporations which refused to give any "substantial" information about their business. In its report in 1909 the Hughes Commission had recommended that the unlisted department be abolished. This recommendation was carried into effect the following year. All stocks dealt in on the floor of the Exchange must now be listed.

THE THEORY UNDERLYING LISTING REQUIREMENTS

It is the purpose of the Stock Exchange to maintain a free market for securities and as far as possible put all buyers and sellers on an equal basis in their transactions. As a very essential part of this program the Exchange feels that no securities shall be permitted on its list which have been issued illegally or fraudulently. Again, no securities of a corporation which is not solvent or is not a substantial going concern shall be listed. In the third place, a free market implies among other things that all the information

reasonably essential to the formation of a more or less correct judgment as to the condition of the corporation shall be made available. The Exchange does not claim any rights to regulate or control the business of corporations or the issue of their securities but it does insist that the market for its securities shall be free and open. To this end it requires that a corporation shall not be fraudulently organized, that its security issues be legal, and that it supply the Exchange with reasonably adequate information as to its business.

GENERAL AGREEMENTS REQUIRED

There are certain matters which each applicant corporation must agree to do or not to do. There are also such factors as the management, property, business and financial set-up of the corporation concerning which detailed information is wanted. This section is concerned with the agreements made by the corporation as between itself and the Exchange. The purpose of these agreements is to protect members and their customers from fraud and to make available adequate current information.

1. *Transfer and registry offices.* Each corporation must agree to maintain two offices or agencies, each distinct from the other and each acceptable to the Committee on Stock List, in the Borough of Manhattan, City of New York. One of these offices or agencies shall be the transfer agent and the other the registrar for all the listed securities of the corporation. Certificates of stock listed on the New York Stock Exchange must be countersigned by the transfer agent and registered by the registrar. Large trust companies are usually employed by corporations to act in the capacity of transfer agent or registrar. No trust company can act in both capacities for the same company at one time. The registrar must make a written agreement with the Stock Exchange "not to register any listed stock, or any increase thereof, until authorized by the Committee." When

the company transfers stock at its own office the transfer must be made by a person acceptable to the Committee on Stock List. He must be specifically authorized by the board of directors to countersign certificates and must be other than the officer authorized to sign certificates of stock. A company cannot be registrar of its own stock. A corporation may be allowed to make transfer of its shares in cities other than New York, but in that case all certificates must be identical with those used in New York as to color and form and must be interchangeable with them. The total shares transferable in all such cities must not be greater than the amount listed.

The purpose of all these requirements is to make the transfer of securities convenient and to prevent fraud and overissue of certificates.

2. *The engraving and form of certificates.* The increasing number of securities coming on the market makes fraud and forging more difficult to detect each succeeding year. The Exchange feels a definite responsibility in this matter and has carefully worked out standards of engraving which make fraud and forgery very difficult. All securities before being admitted to the stock list "must be engraved and printed in a manner satisfactory to the Committee from at least two steel plates by an engraving company whose work the Committee is authorized by the Governing Committee to pass upon; the name of the engraving company must appear upon the face of all securities and also upon the face of coupons and the title panel of each bond." The plates shall be: "(1) a border and tint plate from which should be made a printing in color underlying important portions of the face printing; (2) a face plate containing the vignettes and descriptive or promissory portion of the document, which should be printed in black or in black mixed with a color. The combined effect of the impression from these plates must be as effectual security as possible against counterfeiting. The printing of securities must be in dis-

tinctive colors, to make classes and denominations readily distinguishable."[1] Changes require the consent of the Exchange.

Since the average purchaser of bonds finds it inconvenient to examine the mortgage under a bond issue the Exchange has provided that the text of bonds must "recite conditions of issue, tax exemption, terms of redemption (by sinking fund or otherwise), convertibility, default, interchangeability, or exchangeability of coupon and registered bonds and conversion into other securities." It must also "recite payment of principal and interest in the Borough of Manhattan, City of New York, and provide for transfer and registration." The Committee on Stock List recommends that registered bonds be made interchangeable with coupon bonds.

Certificates of stock shall "recite (1) ownership; (2) par value; (3) whether shares are full paid; (4) non-assessable; (5) preference as to dividends; (6) distribution of assets upon dissolution or merger; (7) terms of redemption; (8) convertibility; (9) voting power; (10) other privilege; and (11) must bear the following legend: This certificate is not valid until countersigned by the transfer agent, and registered by the registrar." Certificates for less than 100 shares bear the legend: "Certificates for less than 100 shares."

3. *Corporate publicity.* Each corporation whose stock is listed agrees to publish once in each year and submit to the stockholders, at least 15 days in advance of the annual meeting of the corporation, a statement of its financial condition, a consolidated income account covering the previous fiscal year and a consolidated balance sheet showing assets and liabilities at the end of the year; or an income account and balance sheet of the parent company and of all constituent, subsidiary, owned, or controlled companies. The Exchange urges more frequent full statements of business and financial conditions but has not seen fit to require more than the annual statements above mentioned.

[1] *Requirements for Original Listing,* the New York Stock Exchange.

4. *Reports as to changes in issues of securities.* The corporation agrees to notify the Stock Exchange of (1) any changes "in the authorized amounts of listed securities," (2) of issuance of additional amounts of listed securities, and (3) of the issuance rights of any type." In the case of rights, owners of securities must be given proper time to record their interests. No changes in listed securities may be made without the consent of the Committee on Stock List.

5. *Changes in the assets behind the securities.* The corporation agrees not to "dispose of any integral asset or its stock interest" in any subsidiary or controlled company or to allow any subsidiary or controlled company to dispose of any integral asset or stock interest in any other company without notice to the Stock Exchange. The Company also agrees (1) to redeem preferred stock in accordance with requirements and (2) to notify the Exchange of any changes made in deposited collateral.

6. *Notices to stockholders and bondholders.* Prompt notice must be given to stockholders and bondholders of any action "in respect to interest on bonds, dividends on shares, or allotment of rights for subscription to securities, notices thereof to be sent to the Stock Exchange." The Stock Exchange must be given 10 days' advance notice "of the closing of transfer books, or extensions, or the taking of a record of holders for any purpose." The Committee on Stock List recommends that a "date be fixed as record for dividends, allotment of rights and stockholders' meetings, without closing the transfer books."

DETAILED INFORMATION REQUIRED

It is not the aim here to give the full detailed requirements, but only to indicate the general subjects upon which information is sought and details sufficient to show that a thorough statement of the facts pertaining to the applicant

company are obtained. When the officers of a corporation indicate by letter or otherwise their desire to list the securities of their company, they are furnished with (1) a stock distribution form, (2) a questionnaire, and (3) an eight- or nine-page letter-size printed folder giving in detail the different requirements that must be met.

The Stock Exchange does not propose to make an initial market for securities of a corporation. A wide distribution of the corporation's securities is a prerequisite to a free market and the Exchange insists that such a distribution shall have taken place before the securities come upon the Big Board. Hence the distribution statement. In it the company must give the number of holders of 100 shares or less and the total shares held by these small holders; the number of holders of 101 to 200 shares and the total number of shares held; the number of holders and the total holdings in the 201- to 300-share class, and so forth, until the 1,000-share class is reached. All holders of more than 1,000 shares are put into one class. Besides these details the number of shares held by each of the 10 largest holders must be given. The reason why many very substantial stocks are not listed is the fact that they are closely held. Moreover, very good small corporations do not have their stock listed because the amount of stock issued is so small that it could be bought up easily for manipulation.

The questionnaire inquires into (1) the authority of the officer or officers making application for listing; (2) the practices of the company as to making reports to stockholders; (3) the control of the company; (4) closing of transfer books; and (5) syndicate holdings of securities or other restraints on them. Examples of the questions are as follows: (1) Are you an officer of the company? (2) Is the application made by action of the stockholders, board of directors, or executive committee? (3) Is there any syndicate or concentrated holding in this security? (4) Is the control of the property vested in any minority holding? (5) The committee desires publication of quarterly state-

ments of earnings. Will you agree to do so? (6) Is there any litigation pending or threatened that would affect the company's source of income from, title to, or possession of any of its property?

The third document sent to the applicant gives directions in detail for making up the application papers and offers the assistance of officers of the Exchange to any corporation desiring such help. The data about the applicant corporation that must be supplied may be said to fall under several heads, each one essential to the investor for forming a judgment of the standing of the company. Under each head a very extensive display of the facts must be given to the Exchange. Roughly the above headings would be as follows: (1) organization of the corporation; (2) securities issued; (3) the property and indebtedness; (4) the management; (5) the earnings; (6) depreciation and dividend policy; (7) present situation as shown by financial and income statements; (8) mines and oil and gas companies; and (9) bonds.

1. Under the head of organization full information is required as to (1) history of the corporation; (2) of predecessors, companies or firms with location and stock issues; (3) conditions leading to new organization; (4) date and duration of charter; (5) business and special rights or privileges under the charter or by-laws; (6) tabulated list of constituent, subsidiary, owned or controlled companies showing date of organization, where incorporated, duration of charter, business, capital stock issues, par value and amount authorized, issued, and owned by the parent company.

2. The information required concerning the securities issued is recorded in answer to questions as to (1) the amount of stock authorized, issued, and proposed for listing, by different classes; (2) amounts unissued and options or restrictions on them; (3) full particulars as to preferred stock (4) purpose of the issue of stock giving amounts issued

for securities, contracts, property, and additional property to be acquired; (5) the actual use made of the funds obtained from the issue with full description of all securities, property, rights, and so forth, so acquired; (6) voting power of obligations of debt; (7) par value and dividend rate; and (8) increases of securities and authority therefor.

3. The property of the company must be described in full, giving: (1) acreage, location, nature, and whether owned, controlled or leased; (2) equipment and character of buildings; (3) list of franchises and full description; (4) timber, fuel or mining rights and water rights; and (5) similar information as to all constituent, subsidiary, owned or controlled companies.

The date, maturity, interest rate, sinking fund features, convertibility, amount authorized and issued of all mortgages and other indebtedness must be given in detail both for the parent and all owned, controlled, or subsidiary companies. All other liabilities, such as rentals, leases, guaranties, car trusts, easements, and agreements of the parent and owned, controlled or subsidiary companies, must also be fully explained.

4. The matter required in connection with the management amounts to a statement of the names and addresses of directors, officers, transfer agents, and registrars, together with the location of the principal and other offices, the place and date of the annual meeting and the beginning and end of the fiscal year.

5. The earnings for the last five years when available, together with the amount and character of the annual output for the same period and an estimate for the current year, fulfil the requirements under this head. The committee insists that the company must be a going concern and show at least one full year's earnings.

6. No details as to the depreciation policy are specified further than the general question as to the depreciation

policy. The same may be said about the requirement as to the dividend policy. In this case dividends paid or declared by the parent and by owned, controlled, and subsidiary companies are asked for.

7. Detailed financial and income statements are required of the parent and of owned, controlled, and subsidiary companies. Careful statements must be prepared as to the condition of consolidated or merged companies.

8. In addition to the foregoing requirements additional data must be furnished by corporations which own or operate mines or oil and gas wells. For example, a mining company, among other things, must give an account of its ore bodies, history of workings, character and analysis of its ore, ore reserves compared with previous years, estimates of engineers as to probable life of mines, policy of depletion, and policy of development. The oil business like that of mining has characteristics peculiar to itself, and here as in the case of mining, information as to these distinctive characteristics is sought.

9. In case application is made to list an issue of its bonds, a corporation, in addition to the information required for listing stock, must also give the details as to (1) the bond itself, its date, maturity, interest rate, authority for issue, exchangeability, convertibility, and so forth; (2) provisions for payment; (3) purpose of the issue and use made of the proceeds; (4) description of the mortgage and other security, the transfer and its powers and procedure in case of default of interest; and (5) any unusual provisions pertaining to the bond or its security. In the case of foreign bonds, in addition to regular requirements a special set of requirements must be met by the applicant.

When additional amounts of stocks or bonds are issued and application is made for listing them, numerous questions must be answered. The purpose is to bring out all changes that have been made in the company whether in its management, organization, property, business, issues of securi-

ties, earnings, and so forth, since its previous application for listing of any of its securities. This requirement is simply a part of the Exchange's program to prevent fraud and to furnish to its members and the public as full and as current information as possible.

PAPERS TO BE FILED WITH APPLICATION

Besides the application for listing various other documents must be filed with the Committee of Stock List. For listing of stock the following are required: (1) three copies each of the charter and by-laws as amended to date, of leases, franchises, easements, and special arrangements; (2) one copy each of the resolutions of stockholders and directors and of public authority (*a*) authorizing the issue of stock, (*b*) authorizing the issue of stock on conversion of other securities, (*c*) directing specific reservations of authorized stock for conversion, (*d*) authorizing, by name, official to appear for listing securities, (*e*) appointing transfer agent and registrar; (3) opinion of counsel as to legality of organization, authorization, issue, and validity of securities; (4) six copies of the distribution of securities; (5) certificate of registrar as to the amount of securities registered to date of application; (6) report of qualified engineer as to the physical condition of the property; (7) specimens of all securities to be listed; (8) one copy each of the questionnaire, all agreements, certified copy of income account, surplus account, and balance sheet; (9) a map of the property and of probable extensions and additions.

When application is made to list bonds in addition to the above documents, 10 copies of the mortgage or indenture and single copies of the trustee's certificate, the different resolutions of the stockholders and board of directors, certificate of disposition of securities redeemed or refunded, certificate as to collateral deposited, and certified copy of release or satisfaction of underlying mortgages.

THE WORK OF THE COMMITTEE ON STOCK LIST

The proper officer of the applicant corporation, after having prepared all the necessary documents, including the application proper, files them with the secretary of the committee, who goes over the papers and in cooperation with the company makes necessary criticisms. At this time a copy of the application is posted on the floor of the Stock Exchange for examination by members for their own information and criticism. The application is put into the hands of the members of the committee, and a day is set for a hearing before the committee. If the committee finds the application satisfactory, it recommends to the Governing Committee that the securities be put on the list.

In the hearings before the committee it often turns out that the original application needs numerous corrections, amendments and additions. These are embodied by the secretary in a revised application which is then printed and distributed to all the members of the Governing Committee for their study. When the application is granted, copies of the revised application are sent to all the members of the Exchange and the president has requested that all members file all applications and that they call the "attention of their customers" to the fact that these applications are available at all times for public reference."[2] The next day after favorable action by the Governing Committee the stock or bond is placed on the Exchange for trading.

MISTAKEN NOTIONS CONCERNING LISTED STOCKS

Many people have the notion that the New York Stock Exchange stands sponsor for every security listed there and that if it does not it should not permit listing of the security. Nothing of this sort is possible even if it were desirable. The Exchange cannot and does not recommend a security as of high investment value by the fact that it

[2] The *Wall Street Journal*, April 1, 1926.

admits it to the list for trading. Moreover, it would be too costly for the Exchange to even check up by actual investigation the truth or correctness of the data furnished by applicant corporations. When it is realized that any guaranties against risk would involve a complete study of each corporation several times each year from the engineering, accounting, legal, financial, and business points of view, it is apparent that any one who expects the Exchange to put its stamp of approval as to its investment position on any of the securities listed, has a totally wrong conception of the functions of the Stock Exchange.

The Exchange proposes to provide an open, free market for securities issued legally and without fraud and to give as full and as correct information as it reasonably can secure about such securities. The Exchange cannot even guarantee the information it receives. The matter of values and prices must ever be left to the judgment of the individual investor and speculator. Every one should know that some very weak securities are on the Big Board, that weak securities involve large elements of risk though they do sometimes develop into very strong investments, and that, on the other hand, some very strong investments, that seem without risk, will turn out to be failures.

A large part of the losses incurred on the Exchange, it may be added, are due to cyclical fluctuations in the market over which the Exchange cannot have much control.

THE VALUE OF LISTING TO THE INVESTOR

If the Exchange gives no guaranties and if very speculative stocks are on the stock list, then why invest in listed stocks? There are several reasons. First, the fact that the security is listed gives him reasonable ground to believe that the issue of securities was legal, that the concern was legally organized, and at the time of listing was a solvent going cerncern with a relatively large issue of securities well distributed so that no single large interest had domi-

nant control of the market. Besides, he knows that he is reasonably protected against counterfeiting of the stock certificates and their overissue. Second, the investor knows that he can get at any time reasonably full and recent information in regard to his securities from any member of the Exchange and from its secretary. Third, his securities have a much higher collateral value than if they had no open, continuous market. This is especially true of stocks. Bonds have a wide over-the-counter market and listing does not mean so much in connection with collateral value as in the case of stocks. Fourth, the investor has constant quotations as to the value of his securities and can convert them into cash at any time. Fifth, the investor is protected against unreasonable commissions and low standards of business practice. Sixth, the fact that his securities are traded on a highly organized market will protect him against the violent fluctuations to which he would otherwise be subject.

VALUE OF LISTING TO A CORPORATION

The writer has before him an announcement of a relatively large issue of stock by a syndicate of bankers. It is there announced that application will be made for the privilege of listing on the New York Stock Exchange. We have seen what listing may mean to the investor. To him this item was intended to appeal. But of what value is listing to the corporation issuing the stock? First, because of the benefits of listing, the corporation's securities will have better standing with investors and will, on the whole, command a higher price. Second, the securities will attain a wider distribution to owners and so create a larger and wider interest in the prosperity of the company. Third, when securities are actively traded in and strong on the market the company of issue receives a large amount of advertising through the market for its securities. This in turn has its effect on its employees, and on the sale of its product. Fourth, future

financing will be easier if a company and its securities are well known.

Not all companies are listed on the New York Stock Exchange. Some do not desire the wider distribution of stock required before listing nor the wider distribution the market would create; others do not desire to make adequate reports and statements of their affairs; still others hesitate because they do not want their securities subject to the "uncertainties of speculation." Again some companies cannot meet the requirements of the Exchange.

CRITICISMS OF LISTING REQUIREMENTS

The Stock Exchange can wield great power over corporations through its listing requirements. Much can be done to raise the standard of corporate methods and practices through the control of the stock list. Much has been done already by the elimination of the unlisted department, the requirement of annual financial statements and quarterly earning statements, and the gathering of fuller and more accurate data concerning the history, management, and current activities of a corporation. The Exchange has, however, not seen fit to inaugurate all the requirements suggested by the Hughes Commission in 1909. The Commission suggested that the Exchange should (1) adopt methods to "compel" all companies whose securities are on the list to file frequent balance sheets, and income and expense accounts and notify the public that full information is open for examination; (2) require, in future applications for listing, a statement "of what the capital stock of the company has been issued for, showing how much has been issued for cash, how much for property with a description of the property, and so forth; (3) state promoter's and vendor's commissions; and (4) adopt means for holding those making the statements responsible for the truth thereof." Van Antwerp suggested as a wise measure the exclusion of promoter's and vendor's shares from the market for a period of time. This

is required practice on the London Stock Exchange where vendor's shares, that is, shares which have been received for the service of selling a property, may not be listed for trading until six months after the shares of the company have been traded in on the Exchange.

The officers of the Exchange in reply to these recommendations call attention to the fact that the Exchange is a private voluntary association and as such has no power over corporations to compel them to list their stock on the Exchange or to prevent them from withdrawing from it. The development of high standards is a matter of long experience. New conditions are continually appearing which raise new problems. For example what attitude should the Exchange take toward investment trust securities? What will be the effect of non-voting stock issues? What are the items that should be required in listing foreign securities? Requirements must be set down only in the light of long experience and study or they may become a hindrance rather than an aid to the stock market.

Again, if the rules of the Exchange are made too strict many stocks will be listed on the less responsible exchanges and the public will receive little protection compared with the protection received under the Exchange. Those men who put forth this type of argument usually claim that it is the business of the state to set standards and require all corporations alike to come up to them. The state has the power and can force uniformity of method and practice. The case of the London Stock Exchange is cited. Here an applicant need not file documents and give detailed statistical data as in New York. The London Exchange wants merely to be sure that the company applying is a *bona-fide* organization, that the people back of the company are reasonably reliable and capable, that a sufficient number of shares has been put on the market to prevent corners and that vendor's shares shall not be listed for six months after trading in the newly listed shares of the company has begun.

The Companies Acts make it mandatory that all com-

panies shall file with the proper governmental authorities adequate information which is open to the public. In other words, the government of England does for the London Exchange in a complete way what the New York Stock Exchange must do for itself with much less power.

In this connection it is interesting to note that the London Exchange thinks so highly of what the New York Exchange has done that it admits to its list without further inquiry any stock listed on the latter Exchange on receipt of the application for listing published by its Governing Committee. While a review of the evolution of listing standards shows many a long step forward in the right direction, yet it also leaves the impression that the Exchange has been overcautious in its requirements and that today it has reached so powerful a place in the stock market that it can begin to assert its power. Several of the suggestions of the Hughes Commission have never been acted upon. A positive, aggressive stand on these points should be taken. Financial papers should gladly cooperate and the investing public should fall into line. Once public opinion is formed, corporations must move along with it. A few years of positive, insistent activity on the part of the Exchange would enable it to put all the Hughes Commission's suggestions into force.

The suggestion that the Federal government and the state governments should pass laws following the example of England would, no doubt, simplify matters for the Exchange if uniformity of standards could be attained. The history of our blue-sky laws and our attempts at state regulation of public utilities and railroads, however, does not promise much in this respect for the immediate future. The Exchange has here an opportunity for extraordinary service.

SECURITIES LISTED ON THE STOCK EXCHANGE

In 1901 there were listed 827 different issues of bonds and 376 different issues of stock. Since that time there has been a steady increase in the bond issues listed until on January 1,

1926, there were on the bond list 1,367 issues. The number of stocks listed also increased steadily until 1916 but since that time the number of issues has almost doubled and on January 1, 1926, 1,043 issues were on the stock list. During the calendar year 1925 the bond list was increased by 35 and the stock list by 116 issues. During 1922, 78 bond issues were added. This was the high year since 1900. The average annual net additions for the five years ending January 1, 1926 were 50.4. The average annual net additions of stock issues for the last three years were 88. The year 1922 resulted in a net loss of 14 issues, but 1923 brought a net gain of 111. This was the largest increase until last year.

Table 15 gives a classification of the bonds and stocks listed on the Exchange January 1, 1926.

TABLE 15

CLASSES OF BONDS AND STOCKS LISTED

Bonds	Issues	Stocks	Issues
U. S. Government	78	U. S. Railway	172
Foreign Government	116	Foreign Railway	8
U. S. Railway	689	U. S. Non-Railway	849
Foreign Railway	36	Foreign Non-Railway	14
U. S. Non-Railway	412	Total Par Stocks	740
Foreign Non-Railway	32	Total No-Par Stocks	303
Total U. S.	1,183	Total U. S. Stocks	1,021
Total Foreign	184	Total Foreign Stocks	22
Grand Total	1,367	Grand Total	1,043

The par value of United States bonds listed is $32,584,278,206, and that of foreign bonds is $4,410,811,327, making a total of $36,995,089,533. The average market price for domestic and foreign bonds is 97.25 and 86.56, respectively. The numbers of shares of domestic stocks listed amounts to 482,370,161 as compared to foreign stocks with 9,245,676 shares. The total market value of all stocks listed was $34,489,227,125, making a grand total market value for both stocks and bonds listed of $69,998,438,583.[3]

[3] *Annual Report of the President of the New York Stock Exchange, May, 1925, to May, 1926*, pp. 4-7, 17-19, 46, 50, 51.

VIII

THE NEW YORK STOCK CLEARING CORPORATION

The New York Stock Exchange Clearing-House. The Stock Clearing Corporation. The Night Clearing Branch: (1) cleared securities; (2) "receive" and "deliver" tickets; (3) the settlement or deliver price; (4) the night clearance sheet and balance tickets; (5) the allotment sheets and balance tickets. The Day Clearing Branch. Loan clearings. The stock transfer department. The Stock Clearing Corporation economizes bank credit.

One hundred years to a day after the first recorded stock brokers' agreement to neither buy nor sell at a commission less than one-fourth of 1% on the "special value" of a "public stock" the New York Stock Exchange Clearing-House was established, May 17, 1892. During these hundred years, settlements were made directly between brokers.

For many years when a sale was made on the floor of the Exchange, the first step looking toward settlement was provided for in its constitution, which required that the seller compare his record of the transaction with that of the buyer at the office of the buyer not later than 4 o'clock p. m. of the day of the transaction. Article XXIV of the old constitution directs as follows:

Section I. It shall be the duty of every member to report each of his transactions as promptly as possible at his office, where he shall furnish opportunity for prompt comparison.

Sec. II. It shall be the duty of the seller to compare, or to endeavor to compare, each transaction at the office of the buyer, not later than one hour after the closing of the Exchange. Nothing in this article shall be construed to justify a refusal to compare before the closing of the Exchange.

Sec. III. It shall be the duty of the buyer to investigate, before 10 o'clock a.m. of the day after the purchase, each transaction which has not been compared by the seller.

Sec. IV. Neglect of a member to comply with the provisions of Section I or Section II hereof shall render him liable to a fine not exceeding fifty dollars, to be imposed by the Committee on Arrangements.

If any differences arose between members, due to misunderstanding or otherwise, "the exact liability of the disputants shall be promptly established by purchase, sale, or mutual agreement." The aim of all these requirements was to eliminate all differences as to the contracts made during the day so that the next morning delivery of securities might go on uninterrupted from the opening of business at 10 a. m. to 2:15 p. m., when all deliveries must have been made. In making settlement each house sent out the securities to all other houses with which it had traded the day before and received securities from all the houses from which it bought. The messenger at the time of making delivery of securities to a house which had bought would be given a check which he would take to the bank for certification. These certified checks he returned to his own house after which they were deposited in the bank of which the house was a customer. This system of direct delivery worked well enough during times of normal trading but broke down in times of great activity. It was, however, very costly in time and labor and kept great amounts of credit tied up in the stock market at all times because all the stock delivered was paid by certified check on bank balances. A broker could not get his stock until he had paid for it, but he could not pay until he had the securities to put up at a bank as collateral for a loan. Two methods were used to overcome the difficulty. One was the overcertification of brokers' checks and the other was the making of morning loans. The broker had an understanding with his bank whereby it certified checks beyond his deposits provided he deposited collateral immediately on receipt, giving with the collateral his note. This procedure was never favorably held by the banking authorities though largely practiced.

Morning loans, the second method, consisted in loans

negotiated each morning before the Exchange opened based on the broker's unsecured note with the promise that collateral would be sent to the bank as rapidly as it was received.

By 1890 the business of the Exchange had so increased that brokers required an enormous amount of temporary credit on account of the direct methods of payment without any such offsets as are afforded by a clearing-house. The banks began to restrict the amount of overcertification and other temporary loans and demanded that some better way must be found by which brokers could manage than by the unsound methods of financing their transactions then in vogue.

THE NEW YORK STOCK EXCHANGE CLEARING-HOUSE

A stock clearing-house had been proposed at different times, but the proposal had always been rejected because of the fear that clerks who would be needed to do the routine work would divulge the business secrets of operators on the Exchange and of the brokerage houses as well.

There was, however, ample precedent to be cited. For over 20 years stock clearing had been an accomplished fact on the continent of Europe and in London. Frankfort had had such a clearing system since 1867. In the following five years the Berlin, Hamburg, and Vienna exchanges had adopted stock clearing systems and the London Stock Exchange had established its stock clearing plan in 1876. On this side of the Atlantic the New York Consolidated Stock Exchange had in 1886 established a plan for clearing both securities and money. Even before this date the Philadelphia Exchange had set up a plan that greatly facilitated stock settlements.

Finally in 1892, at the insistence of the banks, the New York Stock Exchange Clearing-House was established as a part of the Exchange organization under the management of a committee of five members appointed by the Governing Committee. This committee "shall have general charge of

the clearing-house of the Exchange and the business thereof, and shall from time to time designate the securities to be cleared. It may determine the amount of salary or compensation to be paid to officers and employees of the clearing-house and make expenditures from its funds for the conduct of its business. It shall make monthly financial reports to the Finance Committee."[1]

THE STOCK CLEARING CORPORATION

The clearing-house set up in accordance with these provisions functioned quite satisfactorily until the war period. As early as 1913 the banks had insisted that a way must be found to relieve them of the large amounts of credit extension and the work of certification. By 1918 the great demand for funds for war purposes had made it evident that a system of clearing must be established which would not only clear stocks but would also clear money payments on balances of stock that are delivered and handle the transfer of collateral loans from one party to another. Something had to be done to make the clearing of stock more efficient, and a method had to be devised by which less bank credit was needed. To meet this demand the Governing Committee thought best to have an organization, distinct from the Stock Exchange, to work out the demands of the situation. To this end the Constitution of the Stock Exchange was amended December 26, 1918, so as to place upon the Governing Committee the duty of organizing a corporation to be called the "Stock Clearing Corporation." The new corporation was organized with a capital stock of 5,000 shares of $100 par value under the control of the Governing Committee of the Exchange.

The expenses of the Corporation are paid: (1) by a charge of 5 cents per 100 shares placed on the number of shares cleared; (2) a charge of 2 cents per $1,000 money value settled through the Day Branch; and (3) the interest

[1] *Constitution of the New York Stock Exchange,* Section XI, Article 5, 1914.

received from bankers on deposits of the clearing fund, capital and surplus. A liquid clearing fund was provided through contributions by clearing members. The amount contributed by each member is in proportion to his use of the services of the corporation with a minimum amount of $10,000. At the present time the fund amounts to over $10,000,000.

In organizing the machinery of the new corporation it was found that the old clearing-house was quite efficient in the work it was intended to do, that is, the clearance of securities, and with a few minor changes its apparatus was left intact. New mechanism had to be devised, however, for the clearing of money balances and loans. It thus appeared that there were two distinct types of work to be done, each type requiring its own machinery. Moreover, it was evident that money balances could not be cleared until clearance of stock had been provided for. The work of the corporation, then, must be carried on by two branches. The branch attending to the clearance of stock must do its work each day before the branch attending to the clearance of money balances could properly function. Following this idea the old clearing-house which cleared stock only was made the Night Clearing Branch and the new piece of apparatus set up to clear money balances and loans was called the Day Clearing Branch. The latter branch began its work April 26, 1920. Its quarters are immediately beneath the trading floor of the Exchange with working hours from 9 in the forenoon to 5 in the evening.

THE NIGHT CLEARING BRANCH

The present Night Clearing Branch of the Stock Clearing Corporation is substantially the old Stock Exchange Clearing-House as far as its practical operation is concerned. As was indicated above, the old clearing-house cleared only securities but not payments of money. Under the present organization this is still true. A second department, the day clearing department, clears money balances.

1. *Cleared securities.* As a rule, only the most active stocks are cleared through the Clearing Corporation. This leaves the great majority of stocks listed on the Exchange off the clearing list. On the other hand, perhaps, 85% to 90% of all transactions are cleared.[2]

Stocks which are not cleared are known as "ex-clearing-house" and settlement of transactions in them must be made between the contracting parties as in pre-clearing-house days. Again, not all members of the Exchange are clearing members. Such members when dealing in stocks which are cleared must clear through clearing members.

2. *"Receive" and "deliver" tickets.* Two general types of tickets are in use at the Clearing Corporation, called comparison tickets and exchange tickets, respectively. The present constitution requires, as in former days, that contracts must be compared between seller and buyer at the buyer's office except that an exchange of contracts at the Clearing Corporation's offices shall constitute a comparison. In the case of stocks cleared "ex-clearing-house" comparison tickets are used while exchange tickets are employed for stocks that are cleared. Comparison tickets simply state the fact that Jones has sold to or bought from Smith 100 shares of U. S. Steel at 120. On the other hand, an exchange ticket to deliver is an order by the seller commanding the Clearing Corporation to deliver to the buyer, say, 100 shares U. S. Steel at 120 or, in case of a receive ticket, to receive from the named firm 100 shares of American Can.

Throughout the day each clearing member is sending to the distribution department of the Clearing Corporation its deliver and receive tickets. Each clearing member has a box in the distribution department and into these boxes the clerks of the department sort the tickets according to the firm to which they are directed. For example, if Jones has bought 100 shares of American Can from Smith he sends a receive ticket to the Clearing Corporation directing it to re-

[2] Streit, S. F., *Description of Operation of the Stock Clearing Corporation,* 1926, p. 3.

ceive from Smith the stock bought. When Jones' receive ticket comes to the distribution department a clerk places it in Smith's box. When Smith's clerk brings his deliver tickets he will find in Smith's box the ticket sent in by Jones and take it with him back to his office where it will be checked with Smith's records. The deliver ticket brought by Smith's clerk will soon find its place in Jones' box and will be taken from there by Jones' clerk to his office for comparison. By 4 o'clock p. m., Saturdays 1 o'clock, all the tickets must have been deposited at the distribution department. Throughout the day each firm will send in many receive and deliver tickets and will also find in its box many receive and deliver tickets which were brought in by firms to whom it has sold or from whom it has bought. If mistakes occur or disputes arise settlement is to be made speedily by mutual agreement, purchase, or sale. When loss is caused by error, negligence, or otherwise, appeal may be taken to the Arbitration Committee.

Not later than 7 o'clock in the evening all tickets must have been verified and returned along with a clearance sheet to the clearing corporation, where each ticket now may be checked back against the clearance sheet.

3. *The settlement or deliver price.* The clearing corporation does not deliver stock balances but assigns the delivery and receipt of balances to members depending on their balances to deliver or receive. Member A may have sold shares to member B but may be directed to deliver to member C with whom he has had no dealings. Now, at what price shall the delivery be made? Again, member A is directed to receive shares from member D. What price shall he pay to D? Since the Day Clearing Branch settles money balances the problem is at what price shall member A be credited by the Day Clearing Branch for each share he delivers to member C, and at what price shall he be debited for each share he receives from member D.

The Night Clearing Branch fixes a price that is not too far

away from the current situation. Custom has decided that the settlement or delivery price shall be the nearest full number, disregarding fractions, to the closing bid price. In the case of stocks not actively traded on the market, the nearest full number to the last sale price may be designated as the delivery price. If the closing bid should be quite weak or very strong the last sale price probably represents more nearly the real market.

All stock balances of clearing members are debited, credited, and settled by the Clearing Corporation at the settlement or delivery price.

4. *The night clearance sheet and balance tickets.* Throughout the trading day a clearing sheet is being made up by each clearing member. On this sheet are entered all transactions in stocks on the clearing list. On the debit side are given the firms from which shares are to be received, the number of shares, the name of the security, the price, and the value; on the credit side are entered the firms to whom shares are to be delivered with the number of shares, the name of the security, the price per share, and value. Securities borrowed appear on the debit side of the clearance sheet just as if they had been bought, and those lent appear on the credit side with those sold. At the close of the day it will appear that most stocks that have been bought have also been sold. But it seldom happens that the whole day's transactions come out without any balances of shares to be delivered and received.

Let us illustrate the computations of the night clearance sheet by means of a few transactions:

Bought		Sold	
100 shares U. S. Steel at 120	$12,000	100 shares U. S. Steel at 125	$12,500
100 shares Anaconda at 45	4,500	100 shares Anaconda at 42	4,200
100 shares Baldwin at 100	10,000	200 shares Baldwin at 101	20,200
200 shares U. S. Steel at 118	23,600	200 shares U. S. Steel receive at 120	24,000
100 shares Baldwin deliver at 100	10,000		
Draft	800		
Total	$60,900	Total	$60,900

Since the Day Clearing Branch settles with firms on the basis of the settlement or delivery price, all adjustments between the buying price and the delivery price, and the selling price and the settlement price, must be made with the Night Clearing Branch. For example, if a member has bought 200 shares of U. S. Steel at 118 and the delivery price is 120, he is out of pocket $400 when delivery of the shares is made the next day through the Day Clearing Branch. To be even he will draw a draft on the Night Clearing Branch for this amount. If he has made a profit or loss on other shares which clear, this profit or loss must also be accounted for. Suppose he has a loss of $500, then he owes the Clearing Corporation $100 and must send in his check with his clearing sheet.

The transactions in the illustration on page 180 show a cost of $26,500 and a return of $26,800 or a profit of $300 on the shares that clear. The Night Clearing Branch is directed to receive a balance of 200 shares of Steel at $118 and to deliver 100 shares of Baldwin at $101. In other words, the member's account is to be charged $23,600 and credited with $10,100, leaving a net debit balance of $13,500.

On the other hand, at the settlement price the 200 shares of U. S. Steel received will make a credit of $24,000 and the 100 shares of Baldwin delivered, a debit of $10,000; that is, there will be a credit of $14,000 at the Night Clearing Branch in favor of the member on the value of the stock to be received and to be delivered. The member, therefore, is credited with $300 profit and $14,000 for the stock and debited $13,500, the net cost of the stock balances to be received and delivered, making a net credit of $800. For this amount he will draw a draft on the Bank of the Manhattan Company and send it with the clearance sheet to the Night Clearing Branch.

These drafts are countersigned by the manager and are ready for delivery after 12 o'clock the next day. The drafts will, of course, always be offset by checks sent in by other

clearing members who have lost money on their transactions and whose credits are less than their debits.

Along with the clearing sheet are also sent the exchange tickets received from other clearing members and security balance tickets. The latter tickets must be made for the balance of each security to be delivered or received. On every business day except Friday and Saturday a clearing sheet must be sent to the Night Clearing Branch before 7 o'clock p. m. On Friday, tickets are exchanged, but no clearing sheet is made up. All the transactions of Friday are entered on the Saturday clearing sheet which must be ready by 4 o'clock in the afternoon.

5. *The allotment sheets and balance tickets.* An allotment sheet is made up for each stock listed on the balance tickets. The Night Clearing Branch's clerks have access to the night clearing sheets, the exchange tickets, and the balance tickets. It is then a matter of setting down on a sheet of paper the names of firms that have shares of the particular stock for which the sheet is made, to receive and to set opposite their names the names of firms that have like amounts to deliver. The total number of shares to be received must always balance the total number of the same stock to be delivered.

After the allotment sheets have been made up, clerks take up the balance tickets and write on each balance to receive ticket the firm that will deliver, and on each balance to deliver ticket the firm to whom delivery is to be made. These tickets are then distributed by the distributing department to the proper firms' boxes. The next morning between 9 and 9:30 each firm sends a messenger to the distributing department who gets the balance tickets now showing to whom shares are to be delivered or from whom shares are to be received.

Thus far nothing has been said about the payment of stamp taxes. Between 9:30 and 11 o'clock of the morning of settlement day—that is, the next morning after the clearing day—each firm must send to the distribution department

sales tickets with stamps attached for sales of all securities cleared or settled through the Stock Clearing Corporation.

We have now followed the work of the Night Clearing Branch to its completion. It remains for the Day Clearing Branch to conduct the settlement of all allotments.

THE DAY CLEARING BRANCH

Each clearing member, having obtained its balance tickets from the distributing department of the Night Branch as above indicated, must make up an itemized list of shares to receive giving the settlement price and the firms that shall make delivery, and a similar list of stocks to deliver giving the names of the firms to receive the shares and the settlement price. These lists are made up from the balance tickets and must be delivered to the Day Branch before 10 o'clock a. m. They authorize the Clearing Corporation to credit the clearing member for all shares delivered at the delivery price and to charge the member for all shares received at the settlement price contingent upon the delivery or receipt of the shares specified.

Beginning at 10 o'clock a. m., the delivery of securities must be completed by 2:15 p. m. The Stock Clearing Corporation does not deliver certificates of stocks or bonds but directs clearing members to whom to deliver. As each member makes his deliveries he presents a receipt consisting of a credit ticket and a charge ticket. The receiving member signs the tickets and stamps the time of delivery on both of them. These tickets are at once returned to the Day Branch where the delivering member is credited with the number of shares delivered and their value at the delivery price. At the same time the receiving member is charged with the shares and value represented on the charge ticket. From the time a member is charged for the value of securities delivered to him to the time he builds up an offsetting credit by the delivery of securities, he is receiving an accommoda-

tion loan from the Clearing Corporation. It is the aim to keep these accommodations at a minimum.

After all deliveries have been made a final receipt is made up by each clearing member indicating his debit, or credit balance for the day. If he owes the Clearing Corporation, a check for the amount due is sent with the receipt. Payment must be made not later than 2:45 p. m. If the final receipt shows a credit balance, the member draws a draft on the Clearing Corporation and receives payment.

The Day Clearing Branch attends to delivery and settlement of the stock. The Night Clearing Branch gave the member credit for 200 shares of Steel at the delivery price and charged him for 100 shares of Baldwin at its settlement price. The Day Clearing Branch must see to the payments of these amounts at the delivery of the shares. When the 200 shares of Steel are received the member is charged with $24,000 and when the 100 shares of Baldwin are delivered a credit of $10,000 is given him. The settlement at the Day Branch then shows a debit of $14,000 which is paid by check. The net amount paid by the member to the Stock Clearing Corporation amounts to $14,000 less the draft for $800 paid by the Night Branch. The sum of $13,200 is exactly the difference between the cost of all the shares bought and the amount to be received for the shares sold, and the settlement is correct.

Securities not on the clearing list may not be cleared through the Stock Clearing Corporation, but tickets may be exchanged between members through the Night Clearing Branch each afternoon and settlement made the next day through the Day Clearing Branch.

LOAN CLEARINGS

Before the clearance of loans became a part of the work of the Day Clearing Branch, when a member transferred his loan from one lender to another or sold or bought shares he was always compelled to finance the transaction with

unsecured credit. The usual procedure was to get credit at his bank through overcertification of his checks or morning loans. If he wanted to pay his loan at bank A and transfer the loan to bank B he could not get his collateral from bank A until he paid by check on some other bank, but he could not get credit from bank B until he had secured his collateral from bank A and had deposited it with bank B. The same was true in buying stock. To get a loan he must first secure collateral, but this he could not do until he had a certified check. Some bank, therefore, had to lend funds to close the gap between the borrower and lender without collateral security. This type of loan took the form of overcertification or morning loans.

Since March, 1921, the Stock Clearing Corporation has acted as the intermediary in cases like those mentioned above. Its work makes unnecessary a large amount of the overcertification and morning loans. Non-members, however, cannot clear loans through the Clearing Corporation and, hence, must use the old methods.

When a member desires for any reason to shift his loan, he agrees with his lender that the transaction shall go through the Clearing Corporation in a "return loan agreement." The loan agreement specifies the amount of the loan to be paid and itemizes the collateral. When a copy of the agreement is presented to the Day Clearing Branch it may refuse to act as intermediary or ask more collateral and lay down other requirements. If no action is taken within an hour, consent to the agreement is automatically given. The lending bank now sends the collateral to the Day Branch and receives its check for the amount due. At the same time the borrowing member's account is debited for the amount paid on his loan.

When a new loan is made for the purpose of paying the Clearing Corporation or for settlement of a purchase of stock the borrower agrees with the lender to make the transaction through the Stock Clearing Corporation. The form of this agreement is designated a "new loan agreement" and

specifies the amount to be loaned and the collateral to be presented. On approval by the Clearing Corporation the lender gives the Corporation his check in return for the collateral. The lender inspects the collateral to be sure it is as itemized on the new loan agreement and the deal is closed so far as he and the Clearing Corporation are concerned. The Corporation credits the check to the member's account, and whenever his account warrants it he can under certain conditions draw a draft against the Corporation and use the funds as he pleases. At the end of the day, debits or credits arising through borrowing or lending are entered on the "final receipt" of the Day Clearing Branch and are paid by check, if a debit and drawn down by a draft if a credit appears.

The funds necessary to make possible the loan of money to members on the part of the Clearing Corporations come from contributions of $10,000 and more made by each member. The total amount in this fund must never be permitted to go below $10,000,000. Besides, the principle of double liability applies to each member as to his contribution to the fund.

THE STOCK TRANSFER DEPARTMENT

Delivery of shares of stock may be made either in certificates or by transfer of the certificates at the option of the receiver of the shares. Only in cases, first, where personal liability attaches to ownership, and second, when the transfer books are closed, is this rule imperative. In making delivery of shares as directed by the Night Clearing Branch, it often happens that the broker ordered to make delivery does not have certificates in proper denominations to fill the delivery requirements. The certificates in his possession may be too large or may be in less than 100-share lots. In such cases the delivering member can agree with the receiving broker to make delivery by transfer of the certificates. While the certificates are in process of being transferred at the transfer office of the issuing corporation the transfer

department of the Clearing Corporation gives to the receiving member its assignable transfer receipt for the shares. These receipts are accepted by the New York banks as collateral on the same basis as the genuine stock certificates. This plan also makes it possible for members to withdraw certificates of stock from collateral deposited with banks and replace them with the Transfer Department's assignable receipts while the certificates are in the process of transfer.

The president of the Stock Clearing Corporation, referring to the work of the transfer department, states that "on one day, 143,100 shares of stock with a money value of $12,039,200 have been placed in transfer and receipts issued therefor. Furthermore, at one time, there were outstanding 1,219 receipts representing 377,200 shares with a money value of $30,775,400."[3]

The Stock Transfer Department was put into operation May 31, 1923, and its work constantly makes available large amounts of credit to the members of the Clearing Corporation that would otherwise be tied up for 24 hours or longer while stock certificates are being transferred.

THE STOCK CLEARING CORPORATION ECONOMIZES BANK CREDIT

One of the most important economic effects of the work of the Stock Clearing Corporation is the immense saving in the use of bank credit which it makes possible. It is estimated by the authorities of the Clearing Corporation that under the old clearing-house before it was made the Night Branch of the Stock Clearing Corporation 90% of the total volume of transactions of the Exchange was cleared and the amount of credit needed for making settlements was cut down 50%.

But, whereas under the old clearing-house each member made payment of his balance of stock to receive by check on receipt of the stock, now under the new plan no payment

[3] Streit, S. F., *Description of Operation of the Stock Clearing Corporation*, April, 1926, p. 7.

is made between members. Settlement of the day's final balance of debits and credits is made by each member directly to the Clearing Corporation and may call for the use of but one relatively small check. Under the new régime it is estimated that only 20% of the value of each day's transactions is represented by the bank credit used. In other words, the Stock Clearing Corporation makes a saving in the use of bank credit to the amount of 80% of the value of each day's trading on the Exchange.

A few illustrations may serve to show the results that are possible. A case is cited where the settlement of one day's transactions, under methods of settlement used before the old clearing-house was instituted, would have required the use of 19,775 certified checks but under the present plan required the use of 340 checks. In another case where a firm had stock to the value of $1,980,000 to receive and $1,975,000 to deliver, the day's transactions, involving 150 receipts and 163 deliveries, were settled by check for $5,000.[4] While these cases are unusual, yet they are examples of what may take place in the way of saving of bank accommodations.

The clearance of loans, while not directly lessening the number of checks drawn and the amount of bank credit used, accomplishes both these ends in connection with the daily settlements of members through the Day Branch when balances arising out of the clearance of loans are combined with settlement balances on the "final receipt" of the day. Suppose the clearance of a member's loans should show a debit balance of $25,000 and his stock settlement balance a credit of $20,000, then a check of $5,000 delivered to the Clearing Corporation would settle what otherwise would call for a check of $25,000 in favor of the Clearing Corporation and a draft of $20,000 against it.

The daily settlement guards against overspeculation and overextension of the use of credit by members of the Ex-

[4] Streit, S. T., *opus cit.*, pp. 3-6. See also the report of the president of the New York Stock Exchange, May, 1925, to May, 1926.

change. Moreover, the Day Branch has a continuous check on the situation as to deliveries and receipts of securities and therefore any difficulty on the part of a clearing member in meeting delivery requirements is known at once.

An audit department under the direction of the assistant treasurer keeps check on both the night and day branches so as to reveal any errors at once on the part of either members or the Clearing Corporation. Bank balances are carefully checked.

Not only does the Clearing Corporation thus keep close watch over its own affairs and its relation with its members, but it also aims to see that each member properly conducts his business by requiring a "Clearing Members' Agreement" from him giving the corporation power to investigate his business and to protect the corporation and other members against losses.

IX

THE CLASSES OF BROKERS—THEIR ECONOMIC FUNCTION

The commission broker. The two-dollar broker. The floor trader. The specialist. The specialist as a dealer. The specialist as a broker. The customer's protection. The odd-lot dealer. Arbitragers. Limitations to the activity of brokers: (1) crossing orders; (2) "stopping stock" with another broker; (3) demand at a given price may be small; (4) rules as to bids and offers. Classes of brokers on the London Stock Exchange. Advantages and disadvantages of the London system.

A VISITOR to the New York Stock Exchange looking down upon the floor from the visitors' gallery sees men gathered here and there in groups, others rushing about from group to group, but there is little to indicate that these men have widely different responsibilities and serve widely different purposes. Not more than two-thirds of the total membership of the Exchange are, as a usual thing, present. Sometimes those present may not number more than two-fifths of the total number of members. Some of the men on the floor are brokers, others are dealers or traders, and still others combine the work of both types. Brokers execute orders for other brokers, for dealers, or for the public on a commission basis. Dealers, or, as they are also called, traders, buy and sell stocks for their own account, hoping to make a profit. There is also a group of members who combine the work of the broker and the trader. They buy and sell securities for others for a commission, and they also buy for their own account and profit, depending on the number of orders given them by other brokers or dealers and the activity of the market. Brokers are of two classes, commission men, and two-dollar men. Floor traders and odd-lot men work for their own account alone and, therefore, are dealers. The specialist works for his own account and also for others

for a commission, thus combining the functions of the broker and the dealer.

THE COMMISSION BROKER

This type of broker deals exclusively with the public. One or more of the partners of the firm are members of the Exchange and transact the firm's business on the floor of the Exchange. A commission house may specialize in some one line, as for example, railroads or steels, or in several lines; or it may cover the whole security field. Again, such a firm may have many branches throughout the country with private wire connections to all branches. Other houses have no branches outside New York City, but depend on correspondents to furnish them a large amount of out-of-town business; for instance, many banks, bond houses, and brokers in the interior cities are not members of any exchange but execute the orders of their clients through a New York house.

Since a commission house deals with the public, it must maintain a board room and large offices with a staff of bookkeepers and accountants, a statistical department, and a well-trained sales force. It must supply its branches with a ticker service and board room, a staff of bookkeepers and salesmen, a private wire service, and the best economic and statistical services published, as well as the services of its own statistical staff. The commission business is a highly expensive business and could not exist except for the volume of orders executed at a reasonable commission charge. It is the commission house that enables millions of people throughout the whole length and breadth of the country to buy and sell the securities of all types of companies. The small investor in the small town through his broker can buy the securities of the largest and most stable corporations. The commission houses pour into the great markets a constant stream of buying and selling orders representing the ebb and flow of the tides of prosperity in every part of the world. It is through their activity that a wide and deep and

approximately continuous market is created which is representative of every hope and fear that stirs men's acquisitive habits.

THE TWO-DOLLAR BROKER

This type of broker transacts business for members of the Exchange for a commission. For years this commission was $2 per hundred shares, hence the name. The commission has now been raised to $2.50, but the name still persists. There are approximately 200 two-dollar brokers on the Exchange.

When a broker or trader has orders which he cannot execute because of their number or the activity of the market, a two-dollar broker is engaged. If a commission broker has several orders for different stocks at the market, since he cannot be at different posts on the floor at the same time, he hands such orders as he cannot execute to a two-dollar man. If he has limited orders for stocks that are traded in at different posts he may need the services of the two-dollar broker to catch the market at the price set by his patron.

The commission seems low, but when one considers the large amount of business done, and the fact that the two-dollar man's orders are usually large, the charge seems more adequate. Besides, it must be remembered that the two-dollar broker needs no elaborate office and trained personnel. His equipment and personnel are relatively inexpensive. He deals with other brokers and dealers directly, and his responsibility beyond the execution of the order on the floor is not to be compared with that of the commission broker who deals with the public, soliciting orders, building up a large body of patrons, handling their margin accounts, borrowing money on collateral, collecting dividends and interest, and the hundred services performed by the commission man.

The broker's knowledge of everything that is taking place on the floor, his careful observation of the activities of the different brokers and dealers, his judgment as to the significance of all such activities and his skill in executing orders

are the qualities necessary for his success. These he embodies in his own person and his charges need cover relatively little else except payment for his own knowledge and skill.

The two-dollar broker performs a very important service to the exchange in handling the peaks of a very irregular volume of orders. He keeps the business of the Exchange from being held back at rush times because of the inability of the commission brokers to handle it as rapidly as it comes to the floor. The peak loads are thus handled efficiently and immediately, and the orders of the thousands of investors and traders flow along smoothly and without hindrance.

THE FLOOR TRADER

The floor trader or dealer buys and sells for his own account and profit or, perhaps, loss. He does not come into contact with the public nor does he execute orders for members of the Exchange. He operates for himself alone. He is a shrewd, alert, self-reliant free lance. Being a member of the Exchange and executing his own orders, he has no commissions to pay, and can afford to take much narrower margins than any one else. This is particularly true because he has comparatively small office expenses. He often hires desk room only in an office of some brokerage house and pays a very nominal sum to the house to take care of all the details connected with his trading, including the clearing of his stock at the clearing-house and the bookkeeping connected with his transactions.[1]

The floor trader depends for his profits on the size and rapidity of his turnover of stock. He buys one moment and may sell the next. He is neither a bull nor a bear for long. Often he buys and sells many times during the day and at the close is neither long nor short. In this way he avoids paying interest and dividends. The result of trading on small margins of profit with rapid turnover has three very beneficial economic effects: (1) it creates a continuous mar-

[1] Meeker, J. E., *The Work of the Stock Exchange*, p. 100.

ket; (2) it narrows the spread between the bid and asked price; (3) it stabilizes the price from hour to hour throughout the trading period of the day.

An illustration of the method of trading of the floor trader will bring out these points. It is a well-known fact that orders from the customers of commission houses do not come in regularly, so that at any moment there may be plenty of selling orders, but few buying orders, or vice versa. The result of a scarcity of buying orders is a sagging market. Here the floor trader sees a chance to make a quick turn with a small profit and buys, thus supporting the market. When, next, the selling orders are slack and buying orders are coming in, he sells out his long stock, thus keeping the price from climbing up. This buying and selling by the trader tends to minimize the price fluctuations from hour to hour.

Moreover, the spread between the bid and asked prices will be reduced to a minimum on account of the rapidity and volume of turnover and the narrow margins acceptable to the dealer.

Again, since the room trader is always ready to step in with an order to buy when no one else is buying, or to sell when no one else is selling, there is always a market so that any one desiring may buy or sell at any moment.

This fact combined with the two just mentioned aids materially in creating a continuous market that fluctuates relatively little and in which the intervals in price from one sale to the next are at a minimum.

The work of the floor trader, also called the room trader, is most difficult. Since his profits are very narrow on each transaction, he must make few mistakes. Since small fluctuations in the market are very difficult to predict, he must be a man of long experience and training and even then his losses are very numerous. His hope is that the average from month to month and over hundreds of transactions will be in his favor. He protects himself against unexpected large losses by the frequent use of stop-loss orders and gets out of the market before the close and especially before a holiday.

A market often is high during the forenoon and then sags off, and toward the close gets active with a rising trend of prices. There were evidently plenty of buying orders in the morning. While these were coming in, the floor traders sold short. Once the buying orders were executed, the market weakened and then later in the day again grew firm as the floor traders "evened up" by covering their short stock. If the market had opened down, the traders would have bought, and if later in the day the market strengthened, they would sell, possibly near the close, thus causing a decline at the last.

The trader who devotes his time to his work is often criticized as being a high-class gambler who manipulates prices and creates artificial values. On the contrary, his work stabilizes prices and provides a constant market. The economic importance of such a market has already been outlined in a preceding chapter.

THE SPECIALIST

The specialist combines the work of the broker and the dealer. He trades for his own account and also buys and sells stocks on a commission basis for other brokers and dealers. He does not come into contact with the public, and therefore, like the two-dollar broker and the floor trader, he needs no elaborate office and expensive personnel.

As the name implies, the specialist confines his trading to a few stocks. In very active times he may trade in the stock of only one corporation. Since he cannot be at two different posts at the same time, the stocks in which he trades must all be traded in at one post on the floor of the Exchange.

The history of the origin and development of the business of the specialist is not very well known. According to one of the traditions of the Exchange, the circumstance of a broken leg accounts for the first specialist. One of the active members suffered a broken leg which made it impossible for him to continue his active career for some time. Being unable to move about, he chose a stock in which there was much

activity at the time and took up his position at the post where the stock was traded in. As he sat at the post trading in Western Union, then very active, he became so expert in handling the stock that soon other brokers gave him their orders for Western Union for execution. These orders and his own successful trading made his new work more profitable than that of a general trader, and though he again became able to be active on the floor, he chose to remain at one post and execute orders for and trade in only a few stocks located there.[2]

THE SPECIALIST AS A DEALER

When he has no orders to execute for other brokers or dealers at the market or at a fixed price that calls for execution, the specialist stands at one post buying and selling for his own account. A commission broker on the floor gets an order to sell 100 shares of Union Pacific Railroad stock at 140. He hurries to the post where Union Pacific common is sold and asks a specialist there for the market on Union Pacific. The specialist does not know whether the broker has stock to buy or to sell, so he gives him his bid and asked price, say "140 to ⅛," which means that the market will take Union Pacific at 140 and sell at 140⅛, or that he is willing to buy at 140 and sell at 140⅛. The broker now offers Union Pacific in the crowd at the post at 140⅛, for perhaps some one will raise the bid price by an eighth. If no one will take the offer, then he offers to sell at 140, whereupon the specialist or some other broker or dealer in the crowd buys by calling out "Take it." The seller responds "Sold to you 100 Union Pacific at 140." If two or more men called out "Take it" at the same time, without argument coins are matched and the winner takes the transaction. The specialist, like the floor trader, is often willing to take small margins and reverses himself often. He depends upon

[2] Meeker, J. E., *The Work of the Stock Exchange*, p. 107.

his specialized knowledge, rather than upon diversification, for protection against losses.

The specialist's life is not an easy one. He must stand at his post all day long, meeting all comers. The crowd about his post may be large. He must know what each is doing. They are all watching him. Close observation, full knowledge, quick decision and action, and an attempt to deal squarely with all are the prerequisites of his position. It is to his interest to dominate the market at his post. There are, however, other specialists in the same stock. Floor traders are competing for the business in the stock and if he cannot handle business with the same skill and quote prices with as narrow spreads, that is, quote as close prices as his competitors, he will lose orders, and others will come to dominate the market in the stock. As a matter of fact, leadership may pass, now to this specialist and now to that, so that no single specialist can dominate for a prolonged period and without danger of losing control at almost any moment.

The economic function of the specialist is much the same as that of the floor trader. The specialist maintains a constant market for the securities in which he deals at his post. If no one else is buying or selling, he stands ready to buy or sell. Moreover, he keeps the fluctuations in price between sales at a minimum and plays a distinct part in stabilizing prices.

THE SPECIALIST AS A BROKER

The specialist has found it profitable to use his specialized knowledge and skill in the execution of orders for others as well as in trading for himself. The conditions under which he will be engaged by brokers and dealers are somewhat as follows:

1. A broker with orders to buy or sell "at the opening" will engage a specialist if he expects the opening to be very active or if his orders require special skill at execution and are scattered about at different posts.

2. A broker having more orders than he can handle will need help.

3. A broker with several limited orders together with market orders cannot stand at one post waiting for the market to meet the limited orders. He must be elsewhere executing the market orders. Perhaps the market has reached the point where it may meet the price set by the limited order when the broker is called to his telephone booth. He then hands his orders to a specialist.

4. A broker may have open orders some distance from the market, for example, the order may be "Buy 100 U.S. Steel at 112," when the market is at 116. The market may not reach the price of the open order for several days. Since the specialist remains at the post where the stock is sold day after day, he is in a position to handle the order.

5. Floor traders may employ the specialist to get the benefit of his knowledge and skill.

THE CUSTOMER'S PROTECTION

Since the specialist buys and sells for his own account as well as for others and because of his superior knowledge, he is in a position to take advantage of his customer. To afford proper protection to the customer of the specialist, several rules of conduct have been made mandatory by the Exchange. Some of these rules of conduct are as follows:

1. The customer's business must always be taken care of before his own. If a broker gave a specialist an order to buy 100 shares of Industrial Alcohol at 85 and the specialist wants to buy the same stock at the same price, he must put aside his own interest and execute the customer's order first when the market reaches 85. If the price of Industrial Alcohol is 85½ and the specialist thinks anything below 85¼ is a satisfactory price, he can buy at 85⅛ to any amount, but as soon as the price goes to 85 he must cease buying on his own account until customer's orders have been given precedence. In case of a selling order at 85, the specialist can sell for his own account at a price under 85, but at that figure or better he must sell for his client before he looks out for himself.

2. The specialist must not make a profit and charge a commission on the same transaction.

3. If the specialist has two orders, one to buy 100 shares of

Southern Pacific at 103 and the other to sell 100 shares of Southern Pacific at 103, then before he is allowed to "cross" these orders he must offer the 100 shares at 103⅛. If no one can be found to take them at 103⅛, he is then at liberty to sell to the client offering 103. This transaction is known as "crossing orders."[3]

4. "Gunning for stop-loss orders." A specialist with many orders to buy and sell his particular specialty might see that by selling on his own account he could cause the stock to decline until it caught the stop-loss selling orders which he has in large numbers on his book. Once these selling orders were caught, the market would automatically decline, and the specialist could buy in and cover his short stock sold higher up. Suppose the market on Baldwin Locomotive now is at 112, having declined from 115, and the specialist has on his book but few orders to buy below 112 but many selling orders at 111, 110, and 109. Now, if he can by selling short depress the market to 111, the stop-loss orders at that point will become market orders and next in the decline the orders at 110 and 109 will be executed. At this point the specialist covers his own short sales at a good profit.

This program is, of course, not as simple as it would at first appear, because the dominant buying power may be in the hands of the crowd about the post so that he might be compelled to sell a large amount of stock to depress the price one point. Large buying power may exist just below the market in the hands of other brokers and traders which will prevent the expected decline and may cause a rise through market orders that come in because of the good showing made by the action of the market in absorbing large amounts of stock.

On the other hand, if the broker really did hold the predominant position on the market and gave large selling orders for his own account, as above described, his action would be so evidently intended to depress the market to catch the selling orders that he would be detected and according to the rules of the Exchange expelled from its membership.

While the danger of failure and loss and expulsion from the Exchange ever faces a specialist who would violate the

[3] Meeker, J. E., *opus cit.*, p. 111.

trust placed in him, it does seem that the temptation must be very great on occasion to "gun for stop-loss orders" and the Exchange cannot do too much to remove the temptation and to safeguard the specialist's clients against his selfish desire for gain.

THE ODD-LOT DEALER

The "round" or "full" lot or the unit of stock on the New York Stock Exchange is 100 shares of stock. But there has grown up a great demand for less than 100 share lots, that is, odd-lots, from a multitude of small investors and speculators throughout the country. To satisfy this demand, a number of members of the Exchange have developed the business of efficiently supplying commission brokers—who are the middlemen between the public and the odd-lot dealer—with any number of shares less than a full lot that the small buyer may want, or, on the other hand, they will buy through the commission broker odd-lots from the public. Their practice is to sell odd-lots, and when 100 shares or multiples thereof have been sold to buy on the floor of the Exchange a full lot and split it up to the small buyers or, again, they buy small lots through brokers until they accumulate 100 shares or multiples thereof, and then sell them on the floor.

The business done by the odd-lot dealers has become so important from the standpoint of the market and from the point of view of economic and social welfare that a later chapter is devoted to their work and function.

ARBITRAGERS

An arbitrager is one who buys in one market and sells in another for a higher price. He makes his profits by buying, for example, in Chicago and selling in New York or some other market at a price which leaves him a margin of profit beyond his expenses. The term "arbitragers," however, suggests a group of men stationed on the south side of the Stock

Exchange who traded between New York and foreign exchanges, principally the London Stock Exchange. This was the situation before the war. Since then the conditions surrounding the business of arbitraging have very materially changed, and the business of arbitraging has been removed from the floor of the Exchange and is now carried on in the offices of members of the Exchange.

LIMITATIONS TO THE ACTIVITY OF BROKERS

Brokers are subject to numerous limitations and restrictions due to the physical limitations of the Exchange floor, the ticker service, the size of the crowds about the posts, the activity of the market, and the frailties of human nature. To remedy these limitations, numerous customs and rules of conduct on the part of brokers have grown up, some of which have been considered important enough to be written into the constitution of the Stock Exchange. Below are outlined some of these customs, rules, and methods of transacting business by brokers.

1. *Crossing orders.* A broker having an order to sell 300 shares of American Can at 55 and also an order or orders to buy 300 shares of the same stock at the same price may not trade one order for the other until he has first offered the stock at 55⅛. If he cannot find a buyer at ⅛ above the limited order, then he may close the 300 American Can to his customer at 55; that is, a broker can cross orders only after the stock has been offered on the floor at ⅛ above the selling price designated by the selling order.

2. *"Stopping stock" with another broker.* If a broker has an order to buy American Can at "the opening" or at the next sale or at 55, as the case may be, and he thinks the market will be so active that he may not be able to execute the order, he can protect himself by the method known as "stopping stock." This is nothing more or less than an agreement with some broker to take the American Can at the price at which American Can opens or at the price at which the next sale is made or at 55 if a sale is made at that price. The advantage of this process is obvious. No matter what happens in the market, the buyer and

seller both accomplish their purpose. There is no rule against any member's "stopping stock" with any other member.

From the point of view of adequate statistics this procedure is unsatisfactory, for while the sale that makes the "stopped" order effective is duly recorded, the "stopped" order never gets registered on the ticker as a part of the day's business.

3. *Demand at a given price may be small.* Just before the gong sounds at 10 a.m. the man on the floor decides from the orders which he has received to buy and sell, and the orders others like himself are likely to have, from current happenings and the current psychology, at about what price the market will open. He may have orders to buy Famous Players at 100, at 100⅛, and 100¼. He decides the opening price should be 100 bid, 100⅛ asked. The gong sounds and he is calling out his bid and asked prices. Some one calls out to him "Sold 500 shares," while at the same moment sales are made at 100⅛ and 100¼. Meanwhile the broker is buying and selling and crossing orders as actively as possible, but there are not enough buyers to take all the stock listed with him at, say, 100⅛. The tape shows a split opening with a given number of shares sold at 100 to 100¼. The customer of the broker sees the quotation for the opening at 100 to 100¼ and is sure his stock at 100⅛ is sold. As a matter of fact, the broker did his best but could not dispose of all the stock because there were not enough takers at that price. Again, the price may reach 100⅛ later in the day; but if there are not enough buyers to take all the stock offered, the broker cannot sell it and the customer will be disappointed. He should know that the conditions of the market made the sale impossible, and that the broker must operate subject to these conditions.

4. *Rules as to bids and offers.* In order to prevent the manipulation of bid and asked prices, the Exchange in 1910 passed a resolution revised in 1911 and again in 1920 which provides that: (1) the recognized quotations on the Exchange shall apply to units of 100 shares of stock and $1,000 of bonds. "All bids and offers on larger lots shall be considered to be for any part thereof in lots of 100 shares or of multiples thereof, whether so stated or not." (Resolution adopted by the Governing Committee March 30, 1910.) (2) Any broker bidding for a large block of stock at a price above the market for 100-share lots cannot buy the large block in one lot; he must first accept all 100-share lots and multiples thereof being offered, until he has accumulated the amount desired. (3) A broker offering to sell a large block at a lower price than the market on 100-share lots, if his large block

is taken, must first accept all bids of 100 shares and multiples thereof at the market price. (4) If a broker bids for a large lot at a price above the market and the bid is accepted, he must stand ready to accept all smaller lots offered at the market price. (5) If such a broker cannot buy all the stock offered, the seller who accepted the bid for the whole lot must stand aside for smaller lots offered at a lower price at the time the bid for the large lot came into the market. (6) If a broker offers to sell a large block at a low price, he must supply all bids of 100 shares or multiples thereof. (7) If his offer was accepted and he does not desire to supply other bids, then the buyer of the whole block must give up to those bidding for stock at a higher price at the time the offer was made. (8) When a bid or offer is larger than the amount of stock offered or bid in one lot, then the order of precedence inheres in the size of the offer or bid, the largest lot having first place, the second largest second place, and so on.

CLASSES OF BROKERS ON THE LONDON STOCK EXCHANGE

"One important respect in which the London Stock Exchange differs from all others—American, Continental, or Provincial—is the division of its members into two classes, jobbers and brokers, a division that appears to be as old as the Exchange itself."[4] The jobbers are wholesalers and deal only among themselves and with the brokers; the brokers are the middlemen, going between the jobbers and the public. The jobber trades for his own account for a profit; the broker renders his services for a commission, with the public paying the commission. The jobber combines the work of our floor trader and specialist, in so far as these are dealers only. The broker corresponds to our commission broker, as far as the public is concerned.

If a broker in London has an order from his customer for 100 shares of stock, he goes on the floor of the Exchange and finds a jobber who gives him his best bid and offer price. If the broker is not satisfied, he asks for a closer price. Since there are many more jobbers than brokers in the membership of the London Exchange, there is keen competition between

[4] Van Antwerp, W. C., *The Stock Exchange from Within*, p. 335.

the jobbers, and this results in close quotations. When the broker accepts the jobber's offer, he informs his client of the transaction, naming the jobber from whom he bought the stock. The jobber depends on a continuous market to cover his transaction. The London Exchange has passed strict rules defining the field of operation of the two classes of members, but there has always been more or less strained feeling between them because brokers have on occasion dealt with brokers, and jobbers with the public. On the New York Stock Exchange all members are on an equal footing to trade with each other and with the public, as they choose.

ADVANTAGES AND DISADVANTAGES OF THE LONDON SYSTEM

English writers on the stock market claim for their system a closer price and a freer market in stocks. That the market for active stocks is often a closer market cannot be denied, for the spread between bid and asked price in an active stock may frequently be only a sixteenth of a point. There is some doubt as to the claim that the London system provides a freer market than the New York plan. In London, jobbers may trade with jobbers, but brokers must buy and sell to jobbers. They may not trade with other brokers. In New York, commission brokers, traders, speculators, specialists, all are on the same competitive basis, each dealing directly with all others.

In the case of an inactive market or an inactive stock there is no assurance that any jobber is in the market. There may be no jobber willing to trade in the stock, or in a declining or depressed market the jobbers may be absenting themselves for the day. In New York where all types of minds come into direct contact, there is always a market for anything at a price. On this point Van Antwerp[5] says, "In the course of many years of active experience as broker, trader, and speculator, I do not now recall an instance in which I was unable to find a market on the New York Exchange for

[5] *Opus cit.*, p. 340.

any security, however inactive, which I wished to buy or sell. If the specialist in this particular stock cannot satisfy me with his quotation, there are always room traders to whom I may submit my offer; there are also arbitragers, wire houses, and banking houses interested in this particular security."

X

THE TIME AND METHODS OF DELIVERY OF STOCK

"Cash" delivery. "Regular way." "At three days." "Buyer's or seller's options." Holiday settlements. Daily settlements *versus* fortnightly settlements. Advantages and disadvantages of fortnightly settlements.

THE time of the delivery of stock and the receipt of payment is a part of each contract to purchase or sell securities on the Stock Exchange. Contracts may be grouped into four great classes according to the time of the delivery of the securities involved. Bids and offers under each of these classes are considered as essentially different in character. Bids and offers of two types made simultaneously or successively may be accepted at the discretion of the party accepting without consideration of priority.[1]

"Cash" delivery. If delivery is intended to be made on the day of the purchase or sale it must be so specified at the time of the offer and its acceptance. "Cash" delivery simply means that the securities are to be delivered and payment received the same day that the purchase or sale is made. On the London Exchange this same transaction is known by the phrase "for money."

"Regular way." Delivery "regular way" means that delivery of securities is to take place the next full business day following the sale. This is the usual time of delivery of stock and, unless otherwise stated in the bid and offer, delivery "regular way" is implied and the presumption is that the securities will be delivered the next day.

"At three days." Delivery, in this instance, must be made

[1] *Constitution of the New York Stock Exchange,* Art. XXIII, sec. 3.

on the third day after the contract. The securities are sold for an out-of-town customer and are being sent to the New York broker, or for some other reason it is not possible or convenient for the selling broker to make delivery for two days. Perhaps the buyer is not in a position to receive the securities and pay for them for a few days and therefore makes his bid "at three days." In either case the bid and offer must specify the terms of delivery or delivery will be presumed to be "regular way."

"Buyer's or seller's options." A contract giving the buyer the right to call upon the seller for a specified amount of the stock of a given company at an agreed price at any time within a well-defined period is a "buyer's option." If the seller, by terms of the contract, has the right to deliver at his own choice, then the contract is a "seller's option." These options may run for not less than 4 days and not more than 60 days.

On all contracts involving more than three days, written contracts must be exchanged not later than the day following the transaction. One day's notice is usually given before the securities are called for or delivered. For example, in a buyer's option the buyer gives notice at 2:15 p. m. or before on the day before he expects the delivery of the stock. Similarly, in the case of a seller's option the seller gives notice at 2:15 p. m. or before on the day previous to his delivery of the stock. This type of bids and offers is customarily made when the securities involved cannot be delivered in less than 4 days. Without this method of bidding and offering, much inconvenience necessarily would be experienced by brokers dealing in foreign securities. If a New York broker sells for the account of some foreign customer 500 shares of New York Central common, he may either borrow the stock for delivery "regular way" or he may sell on an agreement giving him a seller's option for 10, 15, or 30 days, depending on circumstances. When the securities arrive he gives the customary one day's notice of delivery and the following day

makes delivery. Options are allowed on the Stock Exchange without question, because they always intend that securities shall pass from buyer to seller. If stock, in case of a buyer's or seller's option, is not called for or delivered before the last day of the life of the option, then it must be delivered on the last day. Buyer's and seller's options differ from privilege, that is, puts and calls, in that the options always call for transfer of stock while puts and calls do or do not call for delivery, depending on the price movements of the stock in question.

As to the order of precedence between buyer's option and seller's option the following rule is observed: On offers to buy seller's option or to sell buyer's option, the longest option shall have precedence. On offers to buy buyer's option and to sell seller's option, the shortest option shall have precedence.[2]

Holiday settlements. All contracts falling due on holidays or half-holidays observed by the Exchange shall be settled on the preceding full business day, except that when two or more consecutive days are holidays or half-holidays, contracts falling due on other than the first of such days shall be settled on the next full business day.[3] Contracts to buy or sell "regular way" follow the rule of settling the next full business day except Saturday. Friday's and Saturday's business is settled on the following Monday, and if Monday is a holiday the settlement takes place on Tuesday.

DAILY SETTLEMENTS VERSUS FORTNIGHTLY SETTLEMENTS

On the New York Stock Exchange it is customary to settle all transactions daily, so that at the end of each day every broker knows where he stands in relation to the market. On the London Stock Exchange, on the other hand, settlements are made at the middle and end of each month. When a

[2] *Constitution of the New York Stock Exchange,* Art. XXIII, sec. 3.

[3] *Ibid.,* sec. 4.

customer of a London broker buys stock and wants delivery of the securities the same day, he indicates that fact by the phrase "for money;" if nothing is said the transaction is considered "for the account," and settlement will be made at the next settlement date. British Government securities, consols, India securities, and other securities from distant parts are settled once each month, but all others twice. If a customer buys domestic rails in London the first of the month, his order will not be delivered until the end of the month.

The custom of requiring a margin from the customer is not developed in London in any degree as in New York. In London a customer's credit is carefully inquired into before his account is taken. His credit standing is the basis of the credit extended by the broker instead of collateral as in New York.

From one settlement to another a customer may buy and sell many securities and if at the end of the period he has sold out all the securities he has bought, he has only to make money settlement. If he has not sold all he has bought, then he must receive securities from the seller and make payment, or provide a way by which some one else does these things for him. To accomplish the settlement the London Stock Exchange Clearing-House has been established. Not all securities are on the clearing-house list for clearing through it. Transactions in such securities must be settled between the parties concerned. Many securities, however, are listed at the clearing-house for clearing. To clear these securities, three days—for mining securities four days—are set apart at the clearing-house. At a given hour on the first day, the members' books may be said to be closed, that is, all transactions made up to the designated time go into the clearing and all made after are part of the business of the next fortnight and will not be settled for two weeks.

The first day of the settlement period is called "contango day" or "making-up day." Not all members of the Ex-

change are also members of the clearing-house, but such as are members of the clearing-house make up a sheet for each security traded in during the fortnight giving the buying and selling transactions and the balance of the security to be delivered or received. There will be many sales and many purchases in each issue of stock at different prices. The clearing-house settles the security balances but not the money balances. The Stock Exchange Clearing Corporation in New York clears both security and money balances. Now, if a clearing member has sold 10,000 shares of an issue of stock and has bought 10,500 shares, he has a balance of 500 shares to receive. The "clearing sheet" of some other member will show 500 shares to deliver. The clearing-house now can bring these two members together for settlement.

There are always many traders who have bought stock but for some reason have not sold it. Such traders frequently do not want to take delivery on their stock and pay for it. They therefore make arrangement with their broker to loan it to some broker or dealer who is short on this particular stock. The broker thus continues or carries over the securities to the next settlement a fortnight later. The broker who "carries over" the securities must pay an interest charge to the borrower for the funds he advances. The broker will charge the interest with a commission added to his client. In case there is a scarcity of stock, and there are many shorts, the broker may get an agreement with a trader who is short whereby the short pays a premium to get the stock. Such a premium is called "backwardation."

Perhaps the method of "carry over" or continuation by London brokers will be better understood if it is considered from the point of view of the seller instead of the buyer. If a broker's client who is long on stocks has sold securities but at settlement time does not need the funds arising out of payment for the stock, he will instruct his broker to borrow the stock from some dealer and make delivery, that is, on contango day he asks his broker to carry over settlement until the next settlement period. The lender of the stock pays

interest on the value of it and the broker credits the interest less a commission charge for his service in arranging the loan to his customer's account. If a customer has sold short and does not wish to buy in and cover his sale, the situation is the same and is handled the same as in the case just outlined. Contango day then sees the clearing sheets made up and sent to the clearing-house and all arrangements made for carrying over stocks and bonds until the next settlement period.

The second day of settlement is called "ticket day" or "name day." On this day a broker who wishes delivery on stock which he has bought sends a ticket to his jobber, giving the name of the security, the number of shares, the price, the name and address of the broker's customer, the name of the jobber from whom the securities were bought, and the date. The jobber, if he does not have the securities on hand, endorses the ticket with the name of the member from whom he bought the stock and sends it to him. Thus the ticket passes from seller to seller until it reaches the ultimate seller who still holds the securities ready for delivery. The settlement department takes care of the work of passing the tickets. In the case of mining stocks this process takes two days, but in all other securities the close of the second day is expected to find each member with the necessary information so that he can deliver to the ultimate buyer or receive from the ultimate seller directly without any regard to intermediaries.

The third day is "pay day," or "account day," or "settling day." On this day members who hold securities make delivery to ultimate buying members. Since the price paid by the ultimate buyer may be quite different from that which the member who makes delivery was to receive, a uniform price called the "make-up price" is set by the clearing-house which shall be paid on delivery by all members. Differences between the make-up price and the contract price between the actual buyer and seller must be adjusted between the parties directly concerned. Suppose broker A sells to jobber

B a given security at 85, jobber B sells to jobber C at 86 and jobber C sells to broker D at 87. In the clearing, A delivers directly to D, but he has no right to receive 87 from D. The clearing-house fixes a price, say 86, at which settlements shall be made. D, therefore, pays A at the rate of 86 per share. Now adjustments must be made among the members individually. Payments are made between members by checks on banks that are members of the clearing-house.

ADVANTAGES AND DISADVANTAGES OF FORTNIGHTLY SETTLEMENTS

There is not settled opinion as to the comparative merits of the fortnightly settlements that obtain in London and the daily settlements that obtain in New York. Certain writers prefer the London plan, others the New York system. Again, others say that conditions are so different in the two centers that the fortnightly settlement is best for London, and the daily settlement, for New York. Some recent opinion favors daily settlement of money balances and fortnightly delivery of security balances for both New York and London. One argument for fortnightly settlements in London is that the London market trades in the securities of every nation on the globe, and the time involved in shipping securities makes fortnightly settlements necessary. Another line of argument is that the long settlement period makes London brokers very careful, in selecting their clients, of their credit standing. This results in preventing much of the speculation by irresponsible people that takes place in New York. Many purchases by clients of a broker will run for two weeks before settlement. Since the broker will not receive the stock for two weeks and so need not put up any funds until that time he does not ask the client to make any payments. Many things adverse to the client may happen in two weeks. The securities which he has contracted for may have suffered a large decline, and his business may have gone bad, so that

the broker will stand to take a large loss. With these contingencies in mind the broker carefully selects his clients as to their character, ability, and property. Nothing of the kind is done in New York. If a man has sufficient margin to put up, his order is accepted and the securities, delivered the next day, are held as collateral to be sold in case of a decline in the market, should the customer not keep his margin good.

The third line of argument in favor of the long interval between settlements arises out of the conditions necessary to a stable money market. In London, brokers need call on the banks but once in two weeks. As soon as the settlement period is over, the funds used in making settlement flow back into the banks and are available to bill brokers and discount houses for use in buying and selling the bankers' bills which flow into London because of the ready market at a low discount. Moreover, the funds required at the end of each fortnight are relatively small, when the total trading on the Exchange is considered, and can be largely provided for by the banks without disturbing the money market enough to hinder it from maintaining its functions. Bill brokers, discount houses, the great joint stock banks and the Bank of England buy bankers' bills with funds always available because they are not tied up in the stock market by daily settlement of balances. London's method of settlement is without a doubt a great factor in its supremacy as a financial center.

Opposed to these points in favor of the London plan is the fact that members of the London Exchange fail more frequently than those in New York. Van Antwerp[4] estimates the failures in London as ten times as numerous as in New York. The reason for so many failures lies in the deferred payment of differences and not in the deferred delivery of securities. If a broker buys and the market goes against him he may be bankrupt, but since no money settlement is made

[4] Van Antwerp, W. C., *The Stock Exchange from Within*, p. 350.

for two weeks, such bankruptcy is not forced. In order to recoup his loss the broker or jobber may violently overtrade. He is bankrupt, and if the market goes against him there is nothing to lose; if the Fates are favorable he can meet all demands on settlement day. These ventures, however, often fail and the multiplied losses not only break the speculating broker but other brokers and jobbers also. And this sort of thing happens in spite of the fact that brokers and jobbers, well knowing the danger, keep close check on each other. Daily settlements of money balances obviate all such occurrences.

It seems true that as the New York Stock Exchange takes on more and more of the nature of an international market and as the volume of daily trading increases, it will become necessary to abandon the daily delivery of stock and extend the period to at least a week and possibly to two weeks.

Again, the daily settlement of money balances has been the cause of building up in New York a great call loan market based on security collateral. Surplus funds from all parts of the United States are sent by the banks to New York for lending at call in the stock market. The great fluctuations in security prices and in the activity of the market, together with the seasonal supply and demand for funds in the interior, are the causes of a very unstable call loan rate from day to day and of great extremes in times of depression, on the one hand, and of prosperity and panic, on the other. Call loan rates may be 1½% to 2% in a period of depression, but run up to 25% to 30% in a period of prosperity, with the extremes of 100% to 200% in times of panic. It is believed that the Federal Reserve System will so regulate the credit situation that the extremes of former years will be a thing of the past; however, fluctuations in the call loan rate from 2% to 4%, 4% to 3%, 3% to 5%, 5% to 4%, 4% to 6% at relatively short intervals will make it very difficult to build up a wide commercial paper market in competition with a stable market for money such as existed in London before the war and will soon again exist. If

the rate on bankers acceptances is 3% and the call loan rate is 2%, then money will flow from the call loan market to the commercial paper market, causing the rate to decline. When, now, a short time later call loan rates go to 4½% to 5%, no one will put funds into the commercial paper market and, moreover, money will be withdrawn from there and put into the call loan market. All this creates so large a factor of uncertainty as to the rate of discount that foreign bills will be drawn on centers having a more stable rate, and the domestic dealer in bankers' bills and other commercial paper becomes a speculator depending on fluctuations for his gains or losses. Ability to guess the movements of the stock market is then more important than ability to judge the merits of the paper that is offered on the discount market. In London the rate on contango loans is based on the discount market; in New York the discount rate is dependent on the call loan rate to a degree not at all desirable.

In the development of a world money market for bankers' bills a low discount rate is essential. Exporters the world over will draw their drafts in terms of the money which can be had at the cheapest rate. If the discount rate in New York is 4% and in London the rate is 3%, the exporter in Argentine will draw his time draft on London because he can sell it at a higher price due to a lesser discount than in New York. But a low discount rate depends on a large supply of funds relative to the amount of funds in demand. If then a great volume of funds is tied up in the stock market day after day throughout the year because of daily settlements, it is evident that the supply of money available for the bill market must be limited, at least, by the amount that is used in the daily settlements. Or in other words, daily settlements tend to keep the discount rates high in New York as compared to London where settlements come only twice per month, and where, even at these periods, the money needed to make settlement is relatively small and can easily be planned for. It is very evident that before New York

can develop the money center it is entitled to on account of its position in wealth and trade something must be done to correct the credit situation in the bill market created by our daily settlements of money differences on the Stock Exchange.

To remedy the situation, different plans have been proposed. It seems impracticable to give up our daily settlements of money differences. As has been said above, we will probably sooner or later have to give up daily delivery of securities. If New York should settle money balances but twice each month as in London, we should most certainly have more failures on the Exchange than London has. Protective traditions and financial standards are not developed among our brokers as they are in London. Again, such a system would necessitate the building up of a large and expensive credit machinery to select the risks that have merit and reject those that are unsound. Besides, our people are thoroughly accustomed to the idea of collateral loans and margin calls and it would be very difficult to substitute credit ratings, as set up by credit departments of brokerage houses for free trading by any one who can furnish a satisfactory short-time margin for trading, however small his transactions may be.

In a recent bill introduced into Congress aiming at a betterment of our banking system one of the provisions proposed to link the call loan rate to the rediscount rate and thus stabilize the former. So much opposition to this provision developed that it had to be withdrawn. At present brokers' paper based on Stock Exchange collateral is not eligible for rediscount by the Federal Reserve banks. It was argued that the above provision would aid stock speculation and would make the Federal Reserve System subject to the unsound conditions that are due to the extremes of speculation on the exchanges. In London there are no such fears for the Bank of England discounts Stock Exchange loans at will and without the dire results predicted by opponents of the provision allowing the Federal Reserve banks

the same freedom of action that the Bank of England exercises with what appears a very sobering effect on the stock market. At present in New York the call loan market is largely independent of the commercial paper market. The two markets would be closely connected in the rediscounting of paper coming from both markets at the same rate. If it developed in experience that the rediscount rate for stock exchange paper should be different from the rate of rediscount of commercial paper, proper adjustments could be made. It seems, however, that the former should be regulated with direct reference to the latter.

It must be said for the present plan, that there is not as much independence between the two rates as would seem apparent because the broker borrows on collateral at his bank and the bank in turn rediscounts eligible commercial paper and uses the funds to lend to its broker customer at the call loan rate. If the disparity between the rediscount rate and the call loan rate becomes very great the banks will find it profitable to rediscount commercial paper and put the funds on the call loan market, thus bringing the call loan rate nearer into line with the rediscount rate. Of course, at a time of crisis the banks might be rediscounting much of their eligible paper and, therefore, be unable to give as much aid to the call loan market as if Stock Exchange paper could be rediscounted.

The necessity for making the Stock Exchange loans a stabilizing factor in the money market is becoming more and more pressing as the New York money market develops. A solution must be found. Nothing satisfactory has been proposed to date.

XI

PURCHASING ON MARGIN

A transaction step by step. The margin desirable. The sale of stock carried on margin. Profit possibilities in margins. Interest and dividends. Computing the margin. Dangers of overtrading.

TRADING on a margin is a universal practice in business and industry. The retailer furnishes his permanent capital and, perhaps, part of his working capital and borrows the remainder of his monetary needs at a bank. The wholesaler supplies a part of his capital needs and borrows the rest, hoping to pay back the borrowed funds when he has sold out the goods on which he borrowed. The manufacturer organizes a corporation whose stockholders furnish a safe margin, and the bondholders and banks lend the additional funds needed to carry on the business. The head of a family of small means buys a modest house paying down 50% of the purchase price, and a building and loan association or a savings bank lends the other 50% on a mortgage on the property as collateral. Partial payments in the course of a few years clear the property of the mortgage. In no other way would ownership be possible to thousands of families. One cannot conceive of modern business or modern progress without credit transactions on the part of practically every one who transacts business or becomes the owner of property.

A TRANSACTION STEP BY STEP

Mr. Brown, in Columbus, Ohio, decides that Famous Players at $100 is a good buy. He has $3,000 available and on a $30 margin can carry 100 shares. He has previously opened an account with Jones & Company at their Columbus

office. There is no question as to his honesty in the broker's mind. The customer's man assures him that $30 margin is acceptable and takes his order for 100 shares of Famous Players to buy at the market. Brown may go to the broker's office and sign an order to "Buy for my account and risk 100 shares of Famous Players at the market," or he may give the order by telephone. In either case the order is given to the order clerk who takes it immediately to the wire desk, where it is sent by private wire to the New York office. Meanwhile, the order clerk has handed the order to the bookkeepers, who keep a record of the transaction. At the New York office almost immediately the wire operator receives the message to buy 100 Famous Players at the market. The order is handed to the order clerk, who transmits it to the floor of the Stock Exchange and makes a memorandum of the order for filing and for the bookkeepers. At the firm's telephone booth the telephone clerk has received the order, has recorded it on an order slip, and now presses a button which causes a number to appear in white on two large blackboards on opposite walls of the board room. The number which appears is that of the member of Jones & Company who transacts their business on the floor of the Exchange. The large blackboards with the signal apparatus are called the annunciators. Jones is watching to be called any moment, and on seeing the signal hurries to his telephone booth where the clerk hands him the order. He hurries to post Number 7, where Famous Players is traded. Here he finds a crowd, for at the same post American Can, American Linseed, American Locomotive, American Woolen, Corn Products, Chicago and Northwestern, New York Central, Phillips Petroleum, U. S. Industrial Alcohol, and several others are traded in. In the crowd he finds a specialist in Famous Players; he asks the market and gets the answer 100 to ⅛, that is, bid 100 and offered 100⅛. Jones bids 100 for 100 shares, and some one accepts. Jones notes on a small pad prepared for the purpose, the stock, the price, and the name of the buyer. He hastens to the telephone clerk,

who transmits the details of the purchase to his office, from which the details are put on the private wires and, in a very short time after the order is given, Brown in Columbus is informed of the purchase. If Brown has given his order from his office by telephone, the customer's man who took his order will call him back in a few minutes and give the details of the transaction.

The next day Brown will receive by mail a confirmation of his order to buy 100 Famous Players at the market and also a statement giving the shares bought, the price, the commission, and the total debit as a result of the transaction.

Brown has sent to his broker his check for $3,000 and has received credit for the amount. The broker will receive the stock some time between 10 a. m. and 2:15 p. m. the day following the purchase and must pay the full market price of the stock, $10,000. He has received $3,000 and must either furnish funds of his own or must borrow $7,000 more. The latter is customary. The broker is also borrowing for other customers, perhaps a million, maybe several millions, depending upon the size of the firm and its current business. Mr. Brown's securities are mingled with other securities and put up with a bank as collateral for the amount of money needed to carry all the firm's margin customers. On the first day of each month, Jones & Company's Columbus office will send Brown a statement of his debit balance and the interest owed. Brown is also told that the stocks Jones & Company have purchased for him are ready to be delivered to him at any time at which he pays the amount owed on them or ready to be sold at his order.

THE MARGIN DESIRABLE

If, now, Famous Players begin to drop in price, the broker has a right to call for more margin. This means that Brown must furnish more money or securities or both. If more margin is not forthcoming, Jones & Company can sell him out to prevent a loss to themselves. Brown has protected

himself fairly well, and his stock would have to decline $30 before his broker would lose anything. To be sure, if a sudden slump in the market should come and the firm did not have a reasonable chance to sell out before the price fell below 70, Brown would be compelled to pay any loss the firm would sustain. The contract Brown signs, or tacitly accepts, specifies all these things or, at least, implies them. In 1923 the high point for Famous Players was 93 in January and the low came in October at 52, a decline of 41 points. In 1924 the low came in January at 61 with a rise to 98½ in December. The market then dropped off to 90¼ in February, after which it rose to 103½ on March 2 and then declined to 91¾ on March 30, a fall of 11¾. Although the earnings of the company are very satisfactory and the business is becoming somewhat stable, yet with the above fluctuations in mind and the fact that the business is not a seasonal one and the general market is very high with much uncertainty among the leading business men as to the future, Brown should keep close watch on his margin and keep it intact to the amount of at least 25 points.

THE SALE OF STOCK CARRIED ON MARGIN

After some weeks we will suppose the price of Famous Players has gone to 110 and conditions of the market appear strong, as does also the condition in Famous Players. For various reasons, Brown thinks he had better take his profit. He calls up his broker and orders him to sell 100 shares of Famous Players at 112, G. T. C. The routine of transmitting and recording the order is exactly the same as in a buying order. On the floor of the Exchange the stock is selling at, perhaps, 110½. Under these conditions the order will be handed to a specialist who stands all day at post Number 7. Some days later the price goes to 112 and the specialist sells the stock. He informs Jones & Company's telephone clerk, who, as in the buying order above, starts

the machinery that finally informs Brown of the execution of his order.

Now, it may easily happen that Jones & Company buy exactly as many shares of Famous Players as they sell on this particular day and, therefore, will not need to deliver any of the stock to the Stock Clearing Corporation. The shares, therefore, remain undisturbed at the bank as collateral for loans.

Jones & Company credit Brown with the value of 100 shares at 112, less $25 commission and $4 tax, that is, he gets a credit for $11,200 less $29, or $11,171.

The stock cost him 100 shares at $100 per share plus $25 commission plus interest for 45 days at 6% on $10,025 minus $3,000, that is, $10,025 plus $52.69, or $10,077.69. Brown's profit then amounts to $11,171 less 10,077.69, or $1,093.31 on an investment of $3,000 of his own funds.

PROFIT POSSIBILITIES IN MARGINS

As shown in the above example, a profit of over 35% is made in 45 days. In a rising market, where 20 points' margin per share is accepted, a much greater profit is possible. In the above case 150 shares could have been purchased, resulting in a profit approximately 50% greater than the $1,093 shown above, that is, about $1,640 on $3,000 invested. On a 10-point margin with a 12-point rise the $3,000 invested would have made a profit of over $3,000. Suppose the price had gone up $20 or $40 or $100 in the 45 days or in 180 days even. And all this happens occasionally. As long as the price goes up there is no trouble, but when prices of some stocks are going up and prices of others are dropping, difficulties arise. Suppose one tries to protect against a loss by diversification and certain stocks rise 10 points, but others only 5 points and others drop 8 points. If, in the case of Brown above, 30 shares of stock *A*, 40 shares of stock *B* and 30 shares of stock *C* had been bought and stock *A* had risen 12 points, stock *B* had risen 5

points, and stock *C* had dropped 8 points, what would be the result? Then suppose every third transaction reversed the order, with a 12-point drop for stock *A*, a 5-point drop for stock *B*, and an 8-point rise for stock *C*. If the trader could accomplish this series of three transactions in a year, he might probably net 8% on his investment.

If a trader misjudges the whole market and all his stocks drop, then, of course, his loss is as great as his gains are when all his stocks rise. A transaction on a 20-point margin requires $2,000 for 100 shares of stock. If the stock declines 10 points the loss is 50% of the investment. A decline of 20 points wipes out the total investment. If the stock had been paid in full, only 20 shares could have been bought, supposing the stock at $100. A decline of 20 points would mean a loss of only 20% of the original amount invested as against 50% and 100% respectively in case of trading on a 20-point margin.

In summary, it may be said that most trading is done on a margin basis. If transactions are carefully made and conservative margins are carried, there can be no economic or social objection to such transactions. From the standpoint of profits the case is plainly in favor of the careful, intelligent trader who borrows a part of his funds just as he would do in business.

INTEREST AND DIVIDENDS

The broker charges interest on the amount of money he puts into the transaction. In "regular way" transactions, that is, the customary transactions, the broker must pay for the stocks some time between 10 a. m. and 2:15 p. m. the next day after the stock is bought. He borrows the funds in the morning at his bank and makes payment on receipt of the securities. Interest, therefore, begins to accrue on the day on which the stock is delivered. When the broker sells the long stock for his customer he credits him with the net proceeds of the sale on the day following the sale. Interest on

money borrowed to finance the margin purchase does not cease until the credit is entered on the books the next day after the sale.

The broker regularly collects all dividends. Dividends are credited when they are received. The board of directors of a corporation meets and declares the regular quarterly dividend to the stockholders of record as of the close of business of, say, June 1, payable on July 1. Now the stock will sell ex-dividend on June 1, but it will not be until July 1 that the dividend checks are received. They are sent out usually by a large bank or trust company which acts as fiscal agent for the corporation. If the stock is sold immediately previous to the ex-dividend date, the broker on receiving the stock has it transferred on the books of the corporation to his name. If there is not time to have the stock transferred, the selling broker will give the buying broker a "due bill," which is a form of a promissory note by which the seller, who still has his name on the books of the company when they are closed, promises to pay the dividend to the broker who bought the stock too late to have it transferred. The broker's books will show these items as "due bills receivable." Stock dividends are credited as so many additional shares on the day on which they are received.

It is argued by some that one should not trade in stocks that do not pay their carrying charge. This is good conservative doctrine, and while many people are not equally conservative it may be put forth as, on the whole, the best policy for the smaller investor. He wants an income as well as a profit. If the profit does not materialize as expected, he at least will not need to use his current savings to pay the interest on his holdings bought on margin. The only exception to this general rule which the smaller investor may make if he makes any exception is in the case where dividends are quite certain to be paid in the near future because of large and fairly well stabilized earnings on the part of the company whose stock he contemplates buying.

COMPUTING THE MARGIN

The bookkeeper of a commission house will be called upon frequently for an estimate of a customer's margin, by the customer himself if he is an active trader, and by the house, especially in a falling market or in case the customer trades in highly fluctuating stocks. Every man should keep a careful record of his own trading. From this record he can always ascertain the margin he is carrying with his broker. He should have his own figures confirmed occasionally, perhaps frequently, depending on the market and the securities which the broker is carrying for him.

The method of computing margins requires the following data: (1) the number of shares of each issue of stocks or bonds held in the account by the broker; (2) the prices of these securities; and (3) the debit balance. If the account should show that the customer is long 100 shares of New York Central, 50 shares of Anaconda Copper, and 50 shares of U. S. Steel with a debit balance of $14,000, and if the market price of New York Central is 118, of Anaconda Copper is 38, and of U. S. Steel is 120, then the customer has a margin of $5,700.

100 shares	New York Central at	$118 =	$11,800
50 shares	Anaconda Copper at	38 =	1,900
50 shares	U. S. Steel at	120 =	6,000
200 shares			$19,700
	Debit balance		14,000
	Margin on 200 shares		$5,700
	Margin on 1 share		28.50

The margin in terms of a percentage of the present value of the securities is equal to 5,700 divided by 19,700, or 29%. Suppose the customer wants to know how many more shares he can carry without putting up more margin, the answer will be found as follows:

$25 cover for 100 shares New York Central	$2,500
$25 cover for 50 shares U. S. Steel	1,250
$20 cover for 50 shares Anaconda Copper	1,000
Total cover required	$4,750

If the customer wants to buy Southern Pacific he will want to maintain a margin equal to that on New York Central. This margin ($5,700 minus $4,750, or $950) will permit him to buy 38 shares Southern Pacific.

The case above does not take into consideration that the account may also be short of one or more issues of stock. Let us suppose that the account shows 50 shares of Baldwin were sold short; then the broker must protect himself by providing funds with which at any time to buy in the 50 shares of short stock. If Baldwin is selling at 112, he must set aside $5,600. Now, if the Baldwin was sold at 118, then the account would show a debit balance of $14,000 less $5,900, or $8,100. Since covering the short stock will mean a debit of $5,600 the debit balance that really affects the situation amounts to $8,100 plus $5,600, or $13,700.

The value of the stock on hand	$19,700
Debit balance after covering	13,700
Margin on 200 shares	$ 6,000
Margin on 1 share	30

Percentage of margin $6,000 \div 19,700 = 30\%$

The method of arriving at the percentage of margin is given because the number of dollars or points margin per share mean very little in high-priced stocks on the one hand and in low-priced stocks on the other. A 25-point margin on a stock selling at $500 means very little and is quite impossible in a $5 stock. A 25% margin is much more to the point in cases like these.

The data for the above calculations are available in the customer's account as recorded in the broker's books at all times because the credit or debit balance is entered at each transaction and the balance after the last transaction is to be had at once. The interest can be computed or estimated within a margin of error that is small enough for all practical purposes. The customer, however, should not depend on the broker's records but should keep his own records that the data required above are easily available.

DANGERS OF OVERTRADING

Overtrading is a relative term, depending entirely upon circumstances. For example, a purchase of 50 shares may be overtrading for some people, while 10 times that number is quite conservative for others with funds available as a reserve. Again, a margin of 20 points may be quite sufficient when the trader is experienced and has plenty of time to study the changes taking place in his company and in the market for their product, as well as the changing conditions of the stock market, but 20 points would be overtrading for a man inexperienced in the security market and engaged in other lines of business that take his full time.

The phase of the business cycle is also a deciding factor in overtrading. At the height of prosperity a trader that does not carry heavy margins may be sold out before he realizes it, because of a rapid drop in the market. In the dullest part of the depression a relatively small margin may not be overtrading.

Moreover, a trader with $5,000 may not be overtrading when he buys 200 shares of an issue of stock selling consistently near par, but he would certainly be overtrading if he bought the same number of shares of some other much less stable stock selling at the same price. Overtrading must not be confused with overexpansion of the market. Overtrading applies to the individual and may occur in any individual case in any kind of market. Overexpansion usually refers to the market as a whole, when there is great activity, and stock prices are unusually high. At such times there is much unwarranted speculation and much overtrading by multitudes of individuals.

An individual is overtrading whenever he buys or sells short such an amount of stock that his easily available reserve funds are not sufficient to carry the stock through any contingency that might arise without seriously impairing the customary business activity and the standard of living of the buyer or seller. Here is an illustration of the kind of

thing that occurs too often as the result of the hurry to get rich. "A single speculator was pinched out to the tune of $10,000,000 when he was unable to cover his margins on purchases of Sinclair Oil, according to a story reported by the stock ticker here today. The stock was held as collateral for loans to that amount by New York and Boston banks, the story said, and they closed him out when he was unable to put up additional margins. Officials of the Sinclair Company here today said they thought the story probably correct. They added, however, that the speculator who had been caught had nothing to do with either the management or control of the company."[1]

One of the first principles that should govern the trader is, "Do not overtrade." Violation of this principle has probably been the cause, directly or indirectly, of more and heavier losses than any other type of bad judgment used on the market. As soon as any one gets into the tentacles of the "get rich quick" demon, he is subject to the psychology of the plunger and can only with the greatest effort save himself from it.

Step by step men who mean to be conservative are led to lose their money. Few men limit their initial loss and study the situation before making commitments as they would study any other business proposition. No one expects to succeed in any other business except by hard work and careful study. Why should any one succeed in the field of investment and speculation without the same diligence and care? The psychological effect of margin trading is interesting. The margin trader is especially liable to overstay the market after a rise, because another point and another and another mean so much on his investment. He hangs on, taking a chance on further and further rise because it pays such large returns. After the rise has turned and the decline is in full swing, again he hangs on hoping for a rally in the market. Finally the trader sells out, but long after the proper time.

[1] Quoted from the *Chicago Journal of Commerce*.

XII

THE SHORT SALE

The short sale transaction step by step. Margin requirements. Stock is borrowed by the brokers. The conditions of borrowing. The bull pays interest but the bear does not. Some practical points for the short seller. The economic function of the short sale. Failure of legislation to prevent short selling: (1) legislation in England; (2) the German Exchange Act of 1896.

THERE has always been much opposition to selling short on the stock market. Bill after bill has been introduced into state legislatures seeking to prohibit short selling. The point is made that one cannot legitimately sell what one does not own. The only purpose that any one can have in such a sale is to depress the market and destroy legitimate security values. Short selling creates an artificial market; is a method of manipulation; is injurious to constructive enterprise and, therefore, is economically and socially pernicious and should be prohibited. So runs the argument of those who have little but condemnation for the practice of short selling.

All such argument fails to take into account the fact that the practice of selling short is common throughout the whole realm of business and is not confined to the stock market by any means. When the tailor takes his customer's measure and bargains to make a suit of clothes for $65 and to deliver it in 10 days, we have an illustration of selling something not yet in existence. Baldwin Locomotive accepts an order for 25 locomotives to be built to certain given specifications. This is a short sale. When the cotton grower agrees to deliver a specified number of bales of cotton at a contract price long before the crop has matured, the contract is a short sale.

Any one who sells anything at all at an agreed price expecting later to get possession and deliver, or any one who takes an order at an agreed price expecting later to produce the goods ordered is selling short. In many cases the short sale is a method of insurance rather than a scheme for speculation. This is true in the stock market as well as in the field of production. In other cases the short sale is a speculation whether on the stock market or in the field of production and distribution and, with some exceptions, has effects that are economically highly desirable though in a less directly apparent sense, perhaps, than its insurance function.

THE SHORT SALE TRANSACTION STEP BY STEP

We will suppose that Mr. Brown is trading through an inland branch of Jones & Company, members of the New York Stock Exchange, that he keeps his account in good condition, and that it is profitable to the broker. Brown decides that for many good reasons Anaconda Copper is too high at 48, the present market price. He steps to his telephone, calls up his broker, and gives his order, "Sell 100 shares Anaconda Copper at 48, G. T. C." The order is at once put on the private wires and transmitted to the New York office, where it is relayed by telephone to the firm's telephone clerk at the Exchange, who signals for his broker on the floor by means of the annunciator. The broker seeing the signal hurries to the telephone booth where he receives the order and, on reaching the post where Copper is traded in, finds Copper bid 47 asked 47⅛, whereupon he hands the order to a specialist for execution. The next day, Copper reaches 48 and Brown's order is executed. The specialist makes a note of the sale and sends it by pneumatic tube from his post to the firm's telephone booth. The clerk calls his office, where the report of the sale is transmitted to private wire to the branch office. The next day, Brown gets through the mail a confirmation of his telephone order and also an

advice of the sale giving the number of shares sold, the price, tax, commission, and the final credit to Brown's account.

MARGIN REQUIREMENTS

Margin requirements are the same as in a purchase on margin. If a customer sells 100 shares Copper at 48, his broker must deliver the stock. If the market price should go up instead of down as expected, the customer would stand for taking a loss when he delivered the stock. Suppose the stock sold at 48 went to 55 and the broker was called on for delivery. His loss on 100 shares would be $700 plus commissions and tax. To protect himself against such a contingency he requires the customer to put up a margin on the short side the same as on the long side of the market. The amount of the margin is determined by the same factors and in the same manner as the amount of margin required in a margin purchase. A stable low-priced stock will require $10 margin, a relatively stable stock selling from $50 to $125, $20 to $30.

STOCK IS BORROWED BY THE BROKERS

Unless otherwise specified, the stock which is sold short must be delivered "regular way," that is, the next day not later than 2:15 p. m. Since the customer has no stock he must either buy it in sometime within the day or must have his broker borrow the stock for delivery. If Jones & Company sold Anaconda Copper for Brown at 48 in the morning and it went down to 44 before the closing hour, Brown might well decide to take his profits by ordering his broker to buy 100 shares at the market. If the stock is bought in, Jones and Company will, of course, not need to borrow the stock, for the purchase of 100 shares will cover the sale of the same amount.

Usually, however, the bear in the market cannot realize a satisfactory profit so soon, but must wait days and perhaps

weeks before the price of the security of which he is short declines sufficiently to yield the desired profit. In this case the broker customarily borrows the stock required from some one who holds shares of the same issue of stock and is willing to lend them. On the floor of the Exchange will be found the stock "loan crowd," composed of brokers who have stock to lend. These brokers gather about the "loan" post every day, loaning and borrowing stocks from about 9:45 a. m. to 1:30 p. m. and again from 3:00 to 3:30 p. m. In the transaction outlined above, Jones & Company's member on the floor goes to the "loan crowd" to borrow 100 shares of Anaconda Copper. The borrowed stock is listed on the firm's clearing sheet the same as if the stock had been bought and if the buyer's broker has not already sold it, he will receive delivery from Jones & Company before 2:15 the next day, according to the rules of the Stock Exchange.

THE CONDITIONS OF BORROWING

Brokers are frequently glad to lend stock because of the favorable conditions under which such loans are made. If the broker goes to his bank and puts up stock as collateral for a loan, he will not get more than $80 loan for each $100 market value of the collateral put up and, of course, will pay the current rate of interest.

The conditions under which stock loans are made are usually somewhat as follows:

1. The lender of the stock receives at the time of delivery the full market price in cash.

2. Both the stock and the cash are held on a basis similar to the call loan, whereby the lender can at any time on reasonable notice call for his stock on paying back the money he holds and, on the other hand, the borrower can on reasonable notice demand back his money on delivery of the borrowed stock.

3. If the market price of the borrowed stock goes up, the

borrower must deliver additional cash so that the lender always holds the full market value of his stock in cash. If, however, the market price falls, then the borrower of the stock can demand that the lender return that part of the cash which he holds over and above the market value of the stock.

If Anaconda Copper is borrowed at 48 and the price goes up 5 points to 53 then the lender can demand $5 per share additional cash. The broker provides this amount from the customer's margin. If the market keeps going up, he may be called upon for more cash, whereupon he will call for more margin from his customer. If, on the other hand, Anaconda declines 5 points to 43, the broker can demand a return of $5 per share from the lender. If the decline continues, these returned funds may be used as a margin for further short selling by the customer.

On accepting the order to sell short the broker agrees to attend to the borrowing of the stock and the making of all necessary cash adjustments. The customer agrees, on his part, to protect the broker against costs and losses as long as the broker uses reasonable care.

4. The lender of the stock pays interest to the borrower on the amount of funds which the borrower has put up. If he had not lent the stock but had taken it to his bank for a loan he would have got only $80, or less, depending on the stock, for every $100 market value and would be expected to pay interest. In loaning his stock it has more collateral value, and why should he not pay interest? Ordinarily the rate paid approximates the call loan rate. If, however, there are relatively few lenders of a particular issue of stock and many borrowers, that is, many shorts in the market, the lenders will take advantage of the unfavorable position of the shorts and will refuse to pay so high a rate as they would need to pay if their supply of stock and the demand were about equal. Suppose Anaconda Copper were loaning at 4% and for some reason many traders should get the idea that

Anaconda is selling too high and sell it short in large amounts. This would create a large demand at the stock loan post with, perhaps, a decreased supply. The result would be that brokers who have Anaconda to lend would take advantage of their position and refuse to pay 4%. If the demand is great relative to the supply, lenders may even refuse to pay any interest at all. In such a situation stock is said to loan "flat." If the demand for the loan of stock on the part of the shorts becomes insistent, lenders of stock will demand a premium so that instead of paying interest to the borrower for the money he furnishes, the lender will now not only have the use of the money furnished him without cost but in addition receive a premium of perhaps ⅛ of 1% paid by the borrower. The stock is said to be lending at a premium.

In Table 16 are given the loaning rates of some leading stocks as published in the *Wall Street Journal*.

On February 25, 1925, the market as a whole had had for four months a rather rapid rise. The Dow, Jones indus-

TABLE 16

LOANING RATES, FEBRUARY 25, 1925

Name	%	Name	%
American Can	4	Lehigh Valley	3
Am. Smelting & Ref. com.	4	Marine pfd	4
American Sugar	Flat	National Lead com.	Flat
American Woolen	Flat	Missouri Pacific	3
Anaconda	4	New Haven	3
Atchison	3	Pan-American Petroleum	3
Baldwin	1	New York Central	3
Baltimore & Ohio	3	Northern Pacific	3
Bethlehem Steel	3	Pennsylvania	3
Brooklyn-Manhat. Transit.	3	Reading	3
Chesapeake & Ohio	3	Southern Pacific	3
Chicago, M. & St. Paul	3	Southern Railway	3
Chicago, R. I. & Pacific	3	Studebaker	4
Coca-Cola	3	United Fruit	Flat
Crucible Steel	Flat	U. S. Industrial Alcohol	4
Davison Chem.	4	U. S. Rubber	4
Delaware & Hudson	Flat	U. S. Rubber 1st pf	Flat
Erie	4	U. S. Steel	4
Famous Players	4	Union Pacific	3
General Motors	4	Western Union	Flat

trial average stood at 122.86 as against a low of 99.18 on October 14, 1924. Call money was at 4% to 4¼%. Many people were expecting a break in the market of certain stocks any day. On the other hand, many were operating for a further rise in other stocks. It is very evident from Table 16 that there was a large short interest in Baldwin Locomotive.

The influence of the call loan rate is shown in the stock loaning rates of American Can, American Smelting and Refining, Davison Chemical, Famous Players, General Motors, Studebaker, and U. S. Steel in the loan rates of May 15, 1925, as compared with May 26, 1925. On the first date the call loan rate for money was high at 4%, low at 3¾% with 3¾% as the ruling rate; on the second, the open, high, low, and closing rate was stable at 4%. The stock loan rate on the first date was 3½% for the stocks named, but on the second date the loan rate was 4% to correspond to the higher call loan rate.

That a stock is quoted flat may or may not mean that there is a large short interest in the stock. Delaware & Hudson, United Fruit, and Western Union have lent flat for some years. They are not regularly loaned at any other rate than on a flat basis, that is, the lender refuses to pay interest to the borrower for the money deposited.

5. The borrower of the stock, that is, Jones & Company in our hypothetical case, must pay to the lender all cash and stock dividends declared and all rights issued within the time they are borrowing the stock. Since Jones & Company have delivered the borrowed stock to the buyer who has had the stock transferred to his name or whose broker has had it put in his own name, no dividends or rights come to Jones & Company. On their part, they charge Brown's account for the amount of the cash dividend or the value of the stock dividend and rights and pay such amounts to the lender of the stock. The market compensates Brown by a reduction in the price of the stock equal to the dividend.

THE BULL PAYS INTEREST BUT THE BEAR DOES NOT

On all purchases of stock on margin the broker must furnish such funds for payment of the stock as are not provided by the margin. For these funds the bull must pay interest to his broker for the time he remains long on the stock. If the bull on the market finances his own transaction by borrowing at his bank, he will expect to pay interest there. The bear, however, need pay no interest. When his broker delivers the stock, which has been sold, he receives the funds, which he puts up with the lender of the stock. In other words, the broker does not furnish any of his own funds in handling a short sale and, therefore, charges his customer no interest. Rather, the broker receives interest from the lender on the money which really belongs to the short seller. Usually, however, the broker does not credit his customer's account with such interest received, but considers it payment for his services. The value of the customer to the house may make some difference, but usually the interest received is no more than an adequate service charge which the broker would otherwise have to make for attending to the stock loan involved in the selling and, later, the covering transactions. The short seller, however, as was stated in a preceding paragraph, must make good to his broker all dividends and rights paid by the broker to the lender of the stock. If no dividends or rights are declared before the short sale is covered, there are no such charges to provide for. Any assessments against the stock must be paid by the lender.

SOME PRACTICAL POINTS FOR THE SHORT SELLER

1. Take the same care to study the stock which you sell short as when you buy. A purely speculative stock affords as much, if not more, risk on the short side as on the long. If it is your policy never to buy anything but a dividend-

paying stock, it should also be your policy never to sell any stock but one paying dividends.

2. Do not sell short at a time when the market is oversold already. When every one is bearish and the atmosphere is full of pessimism, it is no time to sell short unless you know your stock and its market without the shadow of a doubt.

3. Do not sell a stock short unless there is a large supply of stock in the hands of brokers for loaning purposes. If there is difficulty in borrowing stocks, if the stock lends at a low rate of interest or flat, the amount available for loans is small or the amount wanted is very large. In the first case the stock is in the hands of investors and will not likely decline much; in the second case there are many shorts, and the market is in a position for a rally rather than a decline.

4. Do not sell short after a stock has had a long, rapid decline. It will probably soon have a rally of from a third to a half of its decline. The method of making profits in the short sale is the same as in the purchase: buy cheap and sell dear. The short sales differ only in the fact that the sale comes before the purchase, while in buying for a rise the sale follows the purchase.

5. If a stock in which there has been much short selling makes a rapid rally while other similar stocks stand still, it is likely that the stock is being manipulated to catch the shorts. In such a case unless your stock is well margined it would be well to take your loss and avoid being "squeezed" or "cornered." When stock for loaning purposes is very scarce a "squeeze," if not a "corner," is always to be guarded against. A "corner" exists when a stock can no longer be borrowed and lenders are demanding the return of their stock. The borrowers must now go into the market to buy and will have to pay whatever those holding the stock demand.

6. Never go against the trend of the market. A market

that is moving upward has occasional reactions of many points. The bear, by selling at the proper time before the reaction, can make good profits, but the chances are that he will get caught sooner or later. In a bull market the averages are weighted against the short seller just as in a bear market they are weighted in his favor. The market is difficult enough of analysis when the averages are in your favor, to say nothing of the difficulty of its interpretation when it is weighted against you.

7. The short seller can remain short as long as his broker can find some one who will lend the stock required. The question is sometimes asked, "How long can a short seller remain short?" Suppose Brown, in our illustration, decides not to cover, his profit not being satisfactory, and he thinks the market price will decline further, but Smith, from whom the stock was borrowed, calls his stock. Jones & Company must now return to Smith what they borrowed. They borrow from Johnson and deliver to Smith. When Johnson calls for his stock, they borrow from Morgan. It is evident that so long as stock is available, Brown need not cover his short sale, providing, to be sure, he keeps his credit standing with Jones & Company good and maintains a satisfactory margin.

8. The short seller realizes his profits in less time than the bull. The periods of decline in prices are always of shorter duration than the time required to push the market to the high point from which the decline sets in. It took from May, 1924, to February 26, 1925, to push Baldwin Locomotive from 104 to 146, but Baldwin declined from 146 on February 26, to 107 on March 30, 1925. It took U. S. Steel from June 6, 1924, to January 26, 1925, to go from 94¼ to 129⅝. On March 6 the price was down to 125⅜ and on March 30 it was at 112⅝. The above is true not only for individual stocks but also of the market as a whole. The average length of the rise was 10 months longer than the decline in the last 7 major swings of the market as shown by the Dow, Jones industrial averages.

THE ECONOMIC FUNCTION OF THE SHORT SALE

Thus far in this chapter we have been interested in the mechanism of the short sale as a means of private gain. It is now our purpose to outline its broader aspects as they affect the economic organization of society.

1. After the market for stocks has been through a long period of decline and depression, men who begin to buy stock are to be commended or certainly not to be condemned. When every business man is pessimistic, when many corporations are making no money, and when there is a high rate of unemployment, the man who has the foresight to see that conditions cannot remain permanently depressed and has the courage to risk his money in the securities of the best companies, as well as the man who has the courage to prepare for a future revival of business, is a really constructive factor in the economic life of the time. In the last five years we have been told over and over again that the height of inflation is as destructive a period as the period of the crisis that follows; that the severity of the decline and duration of the depression that follows are in direct proportion to the degree of overextension of credit and business which characterized the period of prosperity now at a close. If we have been told the truth, it seems that the trader in commodities and securities alike who keeps on buying and booming business at the peak of inflation is to be condemned and that the trader who works for a decline or better still who keeps working to prevent the overstimulation of business and the security market is to be commended as much, at least, as the man who brings his skill and courage into play after there has been a breakdown of the machinery of progress. In other words, the short sale is as much a factor in stabilizing the market as the purchase. It takes more courage to be a bear than to be a bull. Most people want to see prices go up, editorials are optimistic, news writers look on the bright side. We are told to boost and not to knock. The

bear is sneered at as a malicious, destructive agency, and laws are passed against him. The investor who buys at the bottom risks his money to no greater degree than the man who sells near the top. Nevertheless, the community welcomes him. It believes in him as a benefactor, and he is acclaimed everywhere as a true builder of progress.

Not only does short selling tend to prevent the extravagant optimism of the peak of a bull market from running riot, but it also furnishes a support for the market when the market seems in a hopeless decline. It is then that the bear buys in and covers. It is the common experience of trades that when no one else dares to buy the bear is quietly covering his sale. It is to his own profit to do so, and he is more likely to buy than any one else, for he has the good fortune to know his selling price. The bull's position is much more uncertain, because he has no assurance that he can sell at as high a price as he paid in so doubtful a market. The short sale thus has a twofold effect in stabilizing prices in the movement of the business cycle.

2. Short selling is a factor at all times in keeping the market price close to real value. The bear looks ahead and interprets future disturbing events. Long before the public knows of the eventuality or is able to interpret its meaning the bear has been selling the market and so gradually reducing the price to a level warranted by the facts. When the event actually happens and the public rushes to sell, the short seller is in a position to buy, thus supporting the market from breaking severely. The only difference between the long side and the short side is that the longs discount favorable events and when the public rushes in are in a position to sell and take their profits but at the same time stabilize the price. Both types of operators are needed, each offsetting the other and investors in general.

Again, the longs may misjudge events, interpreting them too optimistically so that the market price is pushed above intrinsic values. The bear is less influenced by the optimistic

temperament and acts as a check on the judgment of the other side of the market. Similarly the bull checks the too pessimistically inclined judgment of the bear. In both cases the market price is kept adjusted to intrinsic values.

The professional bear is the ever watchful enemy of bull pool operations, just as the professional bulls are the constant plague of the bear pool manipulations. The bull operators attempt to squeeze the bears and the latter attempt to raid the bull rings. Many a bull pool has been undone in the pitfalls set by the bears.

3. Short sales make possible a continuous market. If a banker has a collateral loan on which the margin of collateral is near exhaustion, and no further collateral is forthcoming and he must sell to protect himself against a loss, where will he turn to find a buyer? After such a decline there would be in the market an enormous amount of short sales remaining uncovered. With odd-lot dealers, specialists, floor traders, and a goodly number of commission brokers' customers short, there would be an enormous potential buying power just beneath the present market ready to assimilate offerings. Here would be the banker's market. The many longs have been caught and are in no mood to buy. Such longs as have liquidated are playing safe, and are awaiting further declines in an uncertain market. In the same uncertain market the bear also is inclined to play safe, but this means to buy. Even if the market were almost sure to decline further, some one of the great numbers of shorts would be timid and not wait for further possible profits. The bear thus is, without question, a very potent factor in the maintenance of a continuous market and all that it means economically.

Floor traders and specialists are considered as of special importance in making a continuous market. Their methods of operation require the short sale as well as the purchase. A floor trader operates on very small margins and must reverse himself very quickly on occasion. If he must always buy before he dare sell, his freedom in the market would be

very greatly curtailed and he would be compelled to give up his business as a floor trader. With the short sale as one of his tools he is willing to buy and sell at all times.

The specialist stands at his post making bids and offers on his favorite stocks, some active, others inactive. A broker approaches him and asks the market on, say, Steel. He says 115 to 115⅛. The broker buys 500 shares at 115⅛. Does the specialist have this stock on hand? Perhaps so, but quite probably he does not but goes short. Assume that short selling is prohibited and the difficult and limited situation of the specialist is at once apparent. In the case of inactive stocks this is especially true, for a specialist would in all probability not hold such stocks for sale. It is his business to create a market and to accomplish this end he must be permitted to sell short.

With the use of the short sale the free operation of the floor trader and the specialist is possible, and a continuous market is an accomplishment. It is perfectly plain, however, that the free use of the short sale and also the purchase by the trader, while a factor in creating a continuous market, also depends for its free use on the fact of a continuous market. A wide market with all kinds of interests freely going short or going long aids in the perfection of a continuous market, which in turn encourages all types of interests freely to go long or short.

4. The short sale makes the best securities available to the smaller investor. The small investor or trader, in order to get proper diversification, often cannot buy in full lots because of lack of funds. He must buy in less than 100-share lots or take a much larger risk. There is also the small saver who desires to own stock and participate in the growth and prosperity of his country. He would be entirely barred from any such ambition if he could not buy small lots. As we know by this time, it is the odd-lot dealer that makes possible the realization of the aims of the smaller investor, that is, the great middle class of business men, pro-

fessional men, farmers, and laborers. But the business of the odd-lot dealer would be impossible without the short sale. The odd-lot dealer stands ready to buy or sell any number of shares from one share to 99 shares at from ⅛ to ¼ point from the price that the richest men pay for their stock and with the same promptness and care that the richest men receive. Now, to make these things possible the odd-lot dealer must often go short. An odd-lot dealer gets an order for 25 shares of Kennecott Cooper, at the market. But he cannot be carrying every kind of stock to supply every want, and the only way to supply the Kennecott Copper is to sell it to the commission broker who gave the order and later buy to cover his short commitments. Moreover, the small margin at which the odd-lot dealer operates is possible only on condition that he is free to take advantage of every phase of the market on both the long and short side. Otherwise his risk would be much greater and he would consequently not be able to give his services except at a much larger margin than the eighth or quarter which he now reserves to himself. Short sales thus by making possible the efficient operation of odd-lot dealers give the great middle classes of the country access to the security market on the same terms as the most well-to-do classes with but a small fraction of a point difference in the market price.

5. The short sale encourages a national and international market. A holder of securities in a western city can call up his broker and sell the securities which he holds at any time. The New York office of the brokerage firm with which he does business will borrow the stock and make delivery the "regular way," awaiting the arrival of the securities properly indorsed. The investor in the interior, knowing that he can sell the securities he possesses in a moment's time, is more likely to put a larger percentage of his funds into securities and to pay a higher price for them. Again, these facilities for the immediate sale of securities increase their collateral value. The banker accepts readily and at high percentage of

their value the securities of his customer as collateral for loans, because he can always sell out without delay if his security becomes doubtful. The same thing is true of the international as of the domestic investor. He can sell his securities, and his broker borrows the stock until the arrival of the securities involved from some distant point. The broad economic effects of a wide market thus facilitated by the short sale touch all phases of business, credit, investment, and speculation.

A second way in which the short sale encourages a national and international market lies in the fact that it facilitates arbitrage in stocks between markets in different parts of the country and of the world. If the price of New York Central Railroad stock is at 117 in New York and 117½ in Chicago, a trader in New York sells short in Chicago at the same time that he buys in New York. The difference is his profit. If London is substituted for New York, the trader sells short in London and buys in New York. These transactions eliminate much of the risk and equalize prices in the leading markets of the world. Moreover, the market will be made more stable and continuous since many competing trading interests can make themselves felt in all the cities and markets.

6. The short sale makes possible the protection against loss afforded by hedging. The short sale can be used as a hedge against loss in various situations. Assume that a trader is long on a given stock which at the present price nets him fair profit, and he thinks the market will go higher. The market, however, becomes mixed, so that the trend is no longer evident. The trader now sells short stock of somewhat similar market position so that if the market drops he will gain as much on his short stock as he loses on his long holdings. Perhaps the confused condition of the market will soon clear up so that the trend again becomes reasonably certain, when he can either sell his long stock and let the short sale run into profits, or cover his short sale and let the long positions stand intact, depending on the trend.

A promoter of a company or the underwriter of securities may want to distribute the shares of stock of the company at interest. Perhaps this will take some months and the general security market is uncertain. He resorts to selling a selection of securities short to hedge his long position and protect against loss. The farmer, or factor, when he hedges in the cotton or grain business does exactly the same thing as the promoter or underwriter. In one case, securities are produced or bought for later distribution; in the other, cotton and wheat are produced or bought for later sale, and in both cases the short sale is used as a hedge to afford protection against price changes. In both cases the hedge is a form of insurance and introduces certainty where before its use uncertainty hinders enterprise.

7. There are many advantages in the short sale. The short sale makes possible trading in the stock of a company before it is issued on the "when, as, and if issued" or the "when issued" basis. A market is thus created which formulates the opinions of traders as to its merits and as to a reasonable price before the stock is issued.

Again, if directors declare a stock dividend payable at a given date a month or more in the future, the stockholder may realize on the dividend immediately by selling short the number of shares to which the dividend entitles him and when the shares are issued he can deliver to the buyer. A stockholder may want to realize on his dividend immediately because he needs the funds or because he thinks the market is in a better position than it will be when the shares are issued.

Possibly the capital stock of the company is expanded and "rights" to subscribe are issued to present stockholders at a price below the market. These "rights" have a value and can be sold "when issued." A stockholder may think the price of his stock is higher now than it will be later and sells short the number of shares for which his "rights" give him a reduced price, expecting to use his "rights" to buy the

new stock from his company and deliver them when they are issued. In the first case the stockholder sells his "rights" short and delivers when the warrants are issued; in the second case he sells stock short and uses his warrants when they are issued to buy the new stock of the company for delivery. The first transaction does not fully conform to all the conventional steps in a short sale, but practically it amounts to the same thing; the second transaction includes all the conventional operations of borrowing stock.

8. The short sale is an important factor in keeping the price of convertible securities in proper relation to the price of the stocks into which they are convertible. If a bond is convertible into a stock at 110 and the stock sells at 120 the convertible bond should sell at a given ratio to 120. When the stock sells above the price at which it should sell relative to the price of the bond, the stock can be sold short and bonds bought, converted into stock, and delivered. The effect is a demand for bonds and a supply of stock with an evening up of prices. This sort of thing will go on until the prices of the two securities have settled approximately into the relationship specified in the certificate of the convertible security. The bondholder thus sees his bonds increase in value relative to stock without the necessity of conversion to the junior issue.

9. Short selling does not depress prices. It is often said that prices are depressed by the activities of the bears. To this charge it has been replied again and again that while the short sale may temporarily depress the market, no such effect can be permanent because shortly the bear will cover so that for every 100 shares sold there will be 100 shares bought. If the selling depresses the price the covering, on the average, will raise the price by an approximately equal amount. Perhaps at times the buying in of stocks will not cause a full recovery of the price, but again it will be the means of pushing the price above that at which the short selling took place.

Before the point at issue here can be decided in favor of either side, much more study is necessary. The truth may be that at certain times the short selling greatly depresses the price of a stock and at other times it has the effect, through the covering operation, of running up the price, but that the rise will on the average offset the decline no one now can tell. And even if it did, that would be no guaranty against serious economic loss through the decline now and the rise at a later time.

FAILURE OF LEGISLATION TO PREVENT SHORT SELLING

After noting the important economic functions of short selling one can see that attempts to prohibit the short sale by statute are likely to fail, and would lead to disastrous economic results. To say that such expectations on the part of those informed on the subject have always been proved true is to put the case mildly.

1. *Legislation in England.* In England, where the purchase and sale of stocks was an early development, sentiment against all forms of stock-jobbing was also an early development. Many laws regulating the business or practices of brokers were enacted at an early date but the first widely comprehensive law was an "Act to Prevent the Infamous Practice of Stock-Jobbing" sponsored by Sir John Barnard and enacted in 1734. The occasion of widespread public hostility against the Stock Exchange and stock-jobbers and brokers was the collapse of the South Sea Bubble. The shares of the South Sea Company were carried from about 120 in April, 1720, to around 1020 in three months by the wildly extravagant speculation of that year. In the collapse, short selling played a very important part. It was seized upon as the special agent of disaster and loss and the act of 1734 singled it out as worthy of marked condemnation and a fine of 100 pounds for each count was assessed. The law was soon brought into the courts where it was held that

such a statute could apply to the public stocks of England, that is, the English public bonds, but did not apply to the stock of companies or to foreign stocks. The law was repealed in 1860. This action would have come much earlier had not the decision of the courts practically nullified the effect of the law so that there was no great need of its repeal from the standpoint of the economic effects involved.

There was, however, one type of stock which to Englishmen seemed to need protection from the depressing effects of short selling. A bank whose stock was declining in price would surely lose the confidence of its depositors, and serious injury might come to a banking institution through no fault of its own but because certain interests had the financial power and the malicious intent to cripple a competitor, regardless of the consequences to the bank and to the community. Again, it might be a bank temporarily in trouble that was attacked simply for the sake of gain, regardless of the fact that the bank if not thus seriously injured would quickly overcome its difficulties and continue without interruption in its proper function. Following out this idea, the Leeman Act was passed in 1867, intended to prohibit the short sale of bank stock. The law was not found practicable and was later repealed.

England has profited by her experience, and speculation on the short side of the market, as well as on the long side, goes on unrestricted by any prohibitory laws. Though England has less restrictive legislation on the subject than any other nation, yet, because of a body of business standards and customs that have grown up, investment and speculation are carried on with less fraud and dishonorable practices on the part of promoters and speculators and with less loss to the public than in any other country.

2. *The German Exchange Act of 1896.* Contrary to the advice of a commission appointed by the Chancellor of Germany to investigate the functions and practices of the Bourse, the Exchange Act of 1896 was passed under po-

litical pressure. The law was aimed particularly at trading in futures in the grain market and selling short on the Bourse. The law forbade all trading in futures in grain and flour. It also forbade trading for the "account" in the stock of industrial and mining companies. In order to keep the public out of the security market and to establish legal responsibility in trading in futures, an "Exchange Register" was set up where every one who expected to trade for future delivery should register his name. Registration of the names of the buyer and seller automatically declared their contracts binding. Contracts with unregistered persons were not enforceable.

Professor Emery, of Yale University, made a careful study of the effects of the Act of 1896 on speculation and business after the law had been in operation about 10 years.[1] His conclusions are summarized on the following pages. As to the effect of the exchange register his findings are as follows:

1. The number of persons who registered was a disappointment, for never more than 40 "outsiders" registered, and the total registration, including banks and brokers, never numbered more than 400. This number did not include all banks and brokers.

2. Banks and brokerage houses found that if they confined their transactions to registered persons their business would be very small. Thus they had to trade for unregistered people.

3. The inability to predict the effects of the law on the market kept the conservative element out and, on the other hand, induced the reckless to plunge deeper than ever before. The unregistered plunger, if his gamble went the wrong direction, could repudiate his contract because he was not registered. Brokerage houses were practically forced to accept the business of unregistered persons or give up doing business.

4. Funds were transferred from Germany to other countries and used there for investment and speculative purposes. The number of agencies of foreign brokerage houses multiplied to four to five times the number previously established in Germany. These agencies thrived on the German investment and speculative business which they built up for their home offices.

[1] Emery, Henry Crosby, "Ten Years' Regulation of the Stock Exchange in Germany," *Yale Review*, May, 1908.

The provision of the law prohibiting trading for the "accounts" aimed to stop buying on margin and selling short, that is, only cash trading on the long side was permitted by the provision. The effects of this provision may be summarized from Professor Emery's study above referred to as follows:

1. The prohibiting of short selling took away the factor of balance and allowed the bull influences to go on unchecked till the inevitable crash came. The effect on prices was greatly to increase the size of price fluctuations.

2. Crises became more severe because inflation went to greater extremes, and because speculation became more reckless. Recklessness fed on wide price fluctuations.

3. The demand for money when all speculation had to be put on a cash basis was so great that the money market became subject to the great fluctuations in speculation. Interest rates became demoralized and the money market subject to money panics.

4. The requirement that all transactions must be by cash payment, and not on margin, put the small banks and brokerage houses at a great disadvantage compared with large financial institutions because of the large amounts of cash and of securities that were constantly needed. Besides, in the large banks one customer's trades could be offset against another's, and the transactions on the exchange grew less and less. Small banks were at a disadvantage as to a surplus of funds and securities and as to their ability to handle trades outside the exchange. The brokerage business in securities was thus being concentrated in the hands of a few large houses.

5. The business of the exchange being under the control, largely, of a few large houses, became much more subject to manipulation. The stabilization that goes with a wide open market was lost.

The law was repealed in 1906 after 10 years of trial.

XIII

THE STOP-LOSS ORDER AND THE HEDGE

The use of stop-loss orders: (1) to limit a loss on the long side of the market; (2) to limit a loss on the short side of the market; (3) to protect a gain on the long side of the market; (4) to protect a gain on the short side of the market. The proper use of stop-loss orders. Method of operation. The use of the stop-order appropriate to each method of operation. Hedging. The value of hedging.

Only the merest amateur lies under the delusion that he can eliminate all loss and "beat the market." However, traders in the security market have developed a number of different methods to protect themselves against the uncertainties of market fluctuations. There are such means as stop-loss orders, hedging, privileges or options, and trading on scale, or averaging, that may be used to good advantage to limit losses or to protect gains already made. It is the purpose of this and the two following chapters to explain the use of each of these devices by the trader.

THE USE OF STOP-LOSS ORDERS

The limited order to buy sets a price somewhere below the market price at the time the order is given. The trader or investor thinks the price will go lower and the order is placed at a figure considered a satisfactory purchase price, giving due consideration to the merits of the stock and its market position. On the selling side of the market a limited order is set at a point above the market.

Stop-loss orders are always given with some definite price specified at which execution is to take place. It is never a market order until the market reaches the specified price when the stop becomes a market order. The stop-loss order to buy is always set at a price above the market at the time

it is given; the order to sell is set at a figure below the market price.

1. *The use of a stop-loss order to limit a loss on the long side of the market.* After a careful study of all the factors involved, our Mr. Brown believes that the common stock of the Continental Can Company will advance. He buys through his broker 100 shares at 60, putting up 20 points' margin. The market, however, may not move as Brown expected, and he is not ready to take much of a loss. Brown, therefore, at the time he buys the stock, puts in an order to sell at 58 stop. If Brown has misjudged the market for Continental Can he will be stopped out at 58 and lose $2 per share and his commissions, tax, and interest.

If the price next falls to 52, and conditions seem favorable, Brown can buy at 52, or 8 points lower, and after the price has gone up about 2½ points all further rise will be clear again, the former loss having been retrieved. The market may now go to 65 or 70, as Brown expected, and his profits will be much better than if he had not used the stop-loss order and held the stock through the reaction.

If the stock did not come back, Brown would suffer the loss but would have 18 points of his margin free for dealing in some other issue. If he had not used the stop-order and held on, his account would show a large paper loss and all his margin would be tied up with danger of being called on for more.

There is another side to this story. If the price had dropped to 57, and had then turned upward, Brown would have been sold out at a loss of over 2 points and, unless he was watching closely, he would not have gone into the market before the price had reached 60 again. If Brown had not used the stop order he would not have suffered the loss of $2 per share, commission for buying, selling, tax, and interest. Because this contingency is always present, many people oppose the use of the stop-loss order in limiting a loss as outlined above. Their contention is that the trader

in stock should not buy when there is any great uncertainty but should enter the market when its trend can be known to a reasonable certainty. When this is true, there will not be any large, lasting decline. Minor reactions of good size cannot be foretold and must be provided for with ample margin. If all these precautions are taken, no stop-loss orders need be placed, and the dangers of their use can be avoided. Thus runs the opposition's argument.

2. *The use of the stop-loss order to limit a loss on the short side of the market.* After a careful study of the relevant facts concerning Famous Players, Brown decides that there are critical factors in both the market and the position of the company which indicate a decline and sells 100 shares at 108. To protect himself against mistaken judgment and a rise in the market, he places a stop at 111. If the price now rises to 114, Brown must take a loss of 3 points plus commission for buying, selling, and tax, but he can sell again at 114, and any decline below 110½ will be profit. Assuming that the price declines to 104, Brown will gain 2½ points more than if he had held his short position through the rise. If the stock had not declined, he would have limited his loss and would have the remainder of his margin free for further trading.

Here, as on the long side of the market, is always the contingency of being stopped out at the turning-point of the market price. If the price goes to 111 or 112, and then begins the expected decline, very probably the stop-loss order will mean nothing but loss. It may be said that such a loss is, however, relatively cheap insurance and should be taken on the same theory that the thrifty householder insures his property year after year though he never has a fire.

3. *The use of the stop-loss order to protect a gain on the long side of the market.* Let us assume that Mr. Brown bought 100 shares of Continental Can common at 60 and the price has gone to 65. By placing a stop at 61 he protects himself against a sudden decline. On the other hand,

the price can run to 70 and upwards. As the price moves up the stop can be placed at 62, 63, 64 and so on, until a satisfactory gain is realized or until the price seems to have discounted the favorable factors of the situation when a stop can be put close up to the market. If the price goes further, well and good, but if it declines, a figure very near the top is realized.

4. *The use of the stop-loss order to protect a gain on the short side of the market.* Brown has sold 100 shares of Famous Players short at 107 because he believes after careful investigation the price will decline. Sometime later the price has declined to 102. A stop at 106 will protect against a loss. As the price declines, the stop can be moved down, always keeping a reasonable distance above the market, until a satisfactory profit is shown or until the price seems to have discounted the unfavorable factors, when the stop can be moved down near the market and if the market continues to decline the additional profits are again protected. If the price rises, the stop will be caught, but a satisfactory profit has been realized. In all these efforts to protect against a loss and make certain of a gain there is always the danger that the stop will be placed too close to the market and the stock sold out in the case of the long side or bought in on the short side just at the point where the expected movement really begins.

THE PROPER USE OF STOP-LOSS ORDERS

Probably no two people would agree as to the conditions under which the stop may be used properly. There are, however, certain situations when it seems that the use of the stop is justified. These conditions are relative to the type of trading that is being done. In this connection at least three distinct methods of operation on the Stock Market must be noted. Each method of operation implies its own use of stop orders. Each method sets its own value on the use of stop orders.

1. METHOD OF OPERATION

1. The first method is that used by traders who incessantly watch the market and, on signs of weakness, buy with the expectation of selling on strength. Floor traders use this method constantly. They hope to make a small average profit on their operations. They are in and out of the market several times a day and depend on volume of turnover to pile up profits for them. Many traders throughout the country operate on the same basis. Traders found in the customers' rooms of brokerage houses and their branches in all the larger cities do a great deal of this trading. Large operators have private offices and tickers, so as to trade undisturbed. Hour to hour, and day to day, fluctuations are the primary concern of this type of trader. He is not particularly concerned whether the price is high or low. He will buy or sell in one case as quickly as in the other. The general trend is of considerable importance but it, too, is secondary to the temporary fluctuations that vary from one to two and three points.

2. The second type of operator trades on swings running from 5 to 15 or 20 points and lasting several weeks or months. The trader who uses this method is in and out of the market perhaps 4 to 6 times each year. He prefers stocks that are active and fluctuate 10 points and more. He must make a fair-sized average profit on each transaction, or his statement of December 31 will not show the expected balance in black figures.

3. There is also the investment type of operation. Stocks are bought in periods of depression and carried through to the next period of prosperity. The interval between the purchase and sale may be anything from perhaps a year to two years. Stocks are heavily margined, as a rule, and little attention is paid to the smaller fluctuations. The trend of the market is of prime importance, and large profits are aimed at. This type of trader is glad to get into the market

several points from the low and get out a few points from the high prices of the swing.

There is also the man who buys and never sells but holds his stock for years, perhaps, never thinking of selling out. It is evident at once that a discussion of the use of the stop-loss order for this type of investor is irrelevant.

2. THE USE OF THE STOP-ORDER APPROPRIATE TO EACH METHOD OF OPERATION

Each of the three methods of operating has its devotees. Many persons use two, or perhaps all the methods named. Each type when highly developed has its own rules of operation, each has its own psychology, and its own devices for guarding against losses.

1. The traders for the temporary fluctuations, floor traders, and office traders, because of the small margins of profit on which they operate, cannot afford to take any large losses and, therefore, the stop-loss order is one of their most necessary tools of operation. An office trader of long experience, in the preface to his book on methods of trading, writes as follows: "What little the author really knows about trading—worth-while knowledge—dates from the time when he began to realize that the control of losses, and the minimization of risks which it implies, is the one vital concern of the trader."[1] The most successful of the office traders place a stop-loss order at the time of making every commitment. It is one of their cardinal principles. After a profit is realized, they "follow up" with the stop, placing it at first at the "flat" point, that is, at a price which will let the trader out even, except that he will lose the transfer tax. As the profit grows, the price is again followed up with a stop. This is done systematically on both the long and the short side of the market. If the trader is called away from the tape, or goes to lunch, or if the stock is carried over night, a stop is frequently placed to protect against a sud-

[1] Brand, John T., *The Business of Trading in Stocks*, 1915.

den break in the market, an ever present danger due to bad news or to manipulation.

In deciding where to put the stop to limit loss, the office trader, also sometimes called the tape reader, notes that the price of a stock in its short fluctuations comes to resting points at the tops and the bottoms. After a double bottom has been made, and the next reaction meets so much resistance that it stops before it reaches the former bottoms, there is an indication of advance. The trader buys and places a stop perhaps one-eighth below the point at which the double bottom was made. As soon as the stock has moved far enough so that a reaction will no longer come as low as the "flat" point, the stop is moved to this position. After the stock reacts, the stop is moved to within an eighth or quarter of the low of the reaction or, if indications of weakness are seen, it may be placed close up to the market price. On the short side exactly the same kind of strategy is followed. Figure 6 provides a graphic illustration. A double bottom has been made at *A* and *B*, and *C* and *D* give indi-

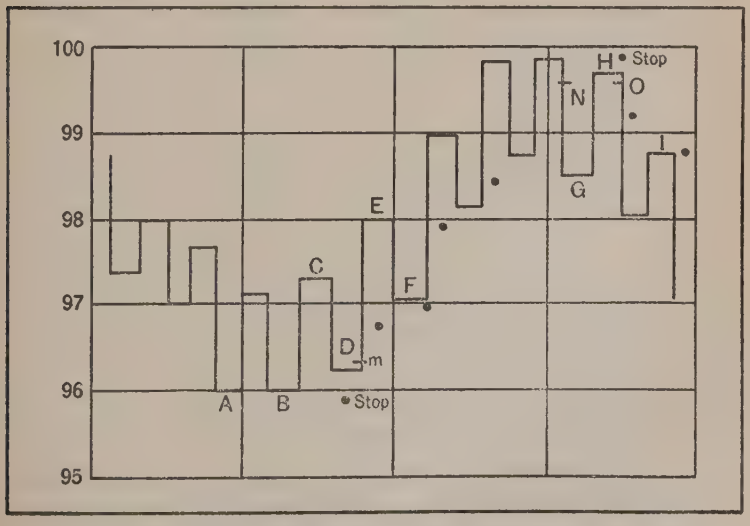


Figure 6: The use of stop orders by traders.

cation of strength in the demand as overbalancing the supply of stock. The trader takes the cue and buys at *m* and places a stop one-eighth below the bottoms *A* and *B*. As soon as the stock gets to 98, the stop is placed at the "flat" point. After the reaction has come, the stop can be placed just below the last low point at *F*. As the price advances, the stop is moved up. The stock is sold out at *N* after the double top at 99¾.

The signals at *G* and *H* are for taking the short side. Stock is sold at *O* and the stop handled on the same plan as on the long side.

2. The operator who is in and out of the market several times each year has a different set of conditions to meet from those of the office trader. He tries to catch the swings due to technical conditions and seasonal variations in business. The general trend is more of a factor in his trading than it is in the operations of the office trader. It is, however, not of primary importance. The short-swing trader, to take advantage of a technical reaction, will sell short even when the general trend is upward. He prefers, to be sure, to buy when the trend of the short swing is in the same direction as the long-time trend, but he will not give up an opportunity to make a turn on the short side when he concludes that a reaction is due. Stocks are bought when the price has declined and sold when the price has risen relative to the price level at the time of the transaction. The price level is a secondary consideration. The short swings are wider when the price level is near the top of the long-time swing than when the price level is near the bottom. The top of the long swing thus affords as good an opportunity as the bottom for the short-swing trader.

It is at once evident that this method of operation on the market is fraught with large risks. The short swings of the market are at best very hard to predict, and the trader must limit his losses and protect his profits and therefore the stop-loss order should be brought into use freely.

When and how to use the stop is a difficult problem and depends on conditions in the market and on the trader's temperament. No two traders use the stop alike. There are certain points, however, on which it seems that the majority of traders could agree that a stop might well be used.

The short-swing trader should keep a chart of the price of each stock in which he is trading and also one of the market as a whole, using the Dow, Jones or some other good average. These charts will show the tops and bottoms of the short-time swings varying from a few weeks to several months. A trader will buy as near the bottom as he can and sell as near the top as possible. The bottoms will show a certain regularity, as will also the tops. When the market shows no definite trend but is fluctuating up and down in a sidewise movement, a horizontal line can be drawn connecting the bottoms and a similar line connecting the tops. Between the two lines is the area within which the market or the price of a particular stock fluctuates, often called the trading area.

Now, if the price is in the lower part of the area and all indications seem to point to an improvement in market conditions and that the stock is being accumulated, the trader will buy and put a stop just below the previous bottoms. It is very probable that the period of a sidewise movement is a period during which stock is being distributed or accumulated. If the price breaks out at the top and the averages of the general market do likewise, it is most probable that the price will move up quite a number of points. The same is true on the opposite side of the market. Now, if the buyer has misjudged his market and a decline sets in, he will gain by having a stop just below the bottom which limits his loss. He is then free to get in again at a much more favorable price. The seller in a sidewise movement of the market sets a stop just above the previous tops. If the market moves out of the trading area on the upper side, this stop will be caught and the trader can change his posi-

tion by buying or, if he still believes his decision in favor of the short side, he is in a position to sell higher up.

The more or less mechanical rule of a two-point stop that has been used by traders has no place in the above type of operation. If the stock is bought near the bottom the stop may be two points away, but if the stock is bought higher up the stop maybe five or more points away from the price paid.

A second position at which a stop may well be used is after a profit has developed. The distance between the market price and the stop price is at first determined by the width of the usual fluctuations. A high-price stock will fluctuate over a wider range of points than a lower-price stock, other things being equal. Again, stocks of the same price differ widely in the range of their fluctuations. After the price of a stock has advanced so that a profit is shown a stop can be placed at the point of no profit as soon as that point is below the usual width of the fluctuations. If the fluctuations are very narrow, a two-point stop may be adequate, otherwise a wider margin must be allowed. After a stock has risen for some time a reaction equal to half of the advance may be expected. The "follow-up" of the stop must provide for such a reaction. After the reaction has come followed by further advance and the position of the stock is due for a reversal, the stop can be placed near the price so that the stock will be sold when it reacts.

There is a third position where a stop may well be used. When a stock is oversold, that is, when the bear operators have had their way for some time and have depressed the price for some days or weeks by selling large amounts of stock and borrowing to deliver, the market is in a situation which calls for the beginning of buying. The trader expects the market to rise, and buys. He may have misjudged or overlooked some adverse factor and so it is wise to put a stop below the price at which he bought, depending on the width of the usual fluctuations of the stock. Again if the market is overbought, it will in all probability soon

decline. Traders have been buying on good news and as the price has been going up, many have gone long on the smallest margin possible. As the price moves up, more and more stock is thrown on the market, and the supply in brokers' hands gets relatively large. The professional bear will now begin his attacks and the market will begin to feel the weight of the large supply of stocks. At such a time the market seems a sale. The seller, however, protects himself against unknown factors of strength by placing a stop two or more points above his selling price, depending on the action of the stock.

As said before, short-swing traders differ as to the use of the stop-loss order. Many use the stop in one, two, or all three of the above outlined situations. Some regularly place a stop several points under each purchase or above each sale at the time the transaction is made.

3. The long-swing trader buys when the price is low and sells when the price is high. The general trend of the market is his primary concern. Intermediate fluctuations concern him little. He is content to wait a year or two years before he realizes on his purchases. He operates on the long side of the market for the most part. He expects to make large profits. His safety lies in the fact that he buys at a low price and at a time of crisis, so that his judgment registers a high degree of success. He does not expect to buy at the bottom nor to sell at the top. He considers his judgment very good if he buys within five points of the bottom and sells as many points from the top. For protection he depends on a wide margin and plenty of reserves. The stop-loss order means less to the long-swing trader than to any other type.

The trader of the above type is often interested in various enterprises and his time is employed otherwise than watching the stock market. It seems wise, therefore, to use stop-loss orders under certain conditions. The unexpected is always happening: a war is breaking out somewhere; an

earthquake wrecks values overnight; a strike ties up a whole industry on short notice; unfavorable weather for a few weeks at the critical point destroys much of the farmers' purchasing power. After a good rise in prices above the purchasing price, therefore, the long-swing trader can wisely use a stop. Suppose stock has been bought at 75 and has increased in value to 90; a wise thing to do is to place a stop half-way between the present price and the low. If the previous low was 72, then place a stop at 80. The stop is moved up from here 1 point for every 2 points of rise in price until the trader decides that the bull movement is nearing its end when he can sell out or put the stop near the market to give him the maximum protection of his profits against sudden reactions. If the stock goes higher, he gets the benefit. If a reaction catches his stop, because it is close up, and then goes higher, he is willing that the man who bought his stock should also have a chance to make some profit for his pains.

It must be remembered, however, that the stop-loss order is but a tool and like a tool it requires skill and intelligence to get the best results from its use. A tool is never an excuse for mental inertia. Any one who quits using his brains to the utmost because he has placed a stop-loss order will soon find his family budget eating into his savings account. Nothing can take the place of careful, thorough study of all the relevant information available.

HEDGING

Hedging has for many years been used as a method of protection against market movements by farmers, elevator companies, and traders on the produce and cotton exchanges. The manufacturers of cotton goods buy raw cotton and hedge by selling cotton short; millers buy wheat and protect themselves against a decline of the price of wheat by selling it short. In the stock market a similar procedure is often resorted to as a means of insurance.

Hedging to protect against loss. Since no one can be long and short of the same stock at the same time on the books of his broker it is the custom if one is long on stock to sell short stocks of other companies. If the long stock declines in price the loss incurred will be offset by the gain made by a similar decline of the price of the short stock. As was explained in our discussion of the functions of short selling, hedging is of value to the promoter or underwriter who has a large block of stock to distribute at the best price and must await favorable conditions in the market. To protect himself against unforeseen breaks he sells short a variety of representative stocks. The term "hedging" is also applied when a trader goes long on one or more stocks expecting them to rise, and goes short of others to protect against a decline. If one transaction should be mistaken, it is not probable that the other will be also.

THE VALUE OF HEDGING

The value of the hedge in trading differs according to different methods of trading.

1. *Office traders.* Few office traders advise the use of the hedge. They limit their losses by using stops and get into and out of the market at every indication of a turn in the temporary trend. They aim to get out of the market every day before the close, so as to begin the new day with a clean slate and an unbiased mind. Writers on office trading advise against playing both sides of the market at the same time, because it is their experience that they are not able to handle both sides well. While they admit that money can be made by trading on both sides simultaneously, yet it is their experience that they can do better day after day if they concentrate on one side only at any moment. When the office trader is uncertain as to the hour-to-hour trend, he gets out of the market and stays out until the market clears up.[2] However, if he has a profit on his transaction

[2] Gann, W. D., *Truth of the Stock Tape,* 1923, p. 46.

and a period of uncertainty comes over the market, he may place a stop near to the market and take a chance on the market continuing for a larger profit. The stop will protect the gain.

2. *Trading on short swings.* Short-swing traders can use the hedge to better advantage than the tape reader who constantly watches the tape. As a rule, he can take a longer time to plan and work out his moves. In case of uncertainty the short-swing trader can hedge his long stock by selling short a stock that occupies a like market position. After the trend clears up, the trader can follow the trend without loss. Theoretically this seems simple enough, but who can be reasonably sure that the stock sold short will move with the stock that it is supposed to hedge? Often one stock moves up at the time the other moves down. Suppose a trader is long of stock *A* and sells *B* to hedge, expecting that if the value of *A* declines the value of *B* will do likewise, but the actual movement when it comes carries *A* down and *B* up. The trader may be right in judging that *B* will move in the same direction as *A*, but *A* may move a week or more before *B* moves. Perhaps *B* advances in value for another week before it declines. The practical difficulties involved in hedging are so many that the trader who hedges is like the student who, if he spent as much time and energy at real study of his lessons as he does in bluffing, scheming, and so forth, would do first-class work. It may perhaps be added that hedging, like bluffing on occasion by the best students, is sometimes a present help in time of trouble.

It happens that at times one group of stocks may be advancing and another declining; for example, 20 rails rose 15.2 points from June 15 to November 3, 1920, while 20 industrials declined 32.53 points from April 8 to November 19, 1920. Again, for several weeks in the early summer of 1924 the rails were moving up while the industrials were still declining. In such situations there is always the oppor-

tunity to be in the market on the long side for some stocks and short side for others. The use of the hedge as a protection is in such cases, however, a secondary consideration, because profits are expected on both trades.

3. *Trading on long swings.* The trader for the long swing can hedge in times of uncertainty with very good reason. Suppose he is long on a particular stock or group of stocks bought at 75. There has been a rise in value to 105. The market hesitates for some weeks in a sidewise movement. The business situation is mixed. Here is a chance for protection against a break by selling a selected stock or group of stocks short. Some people would prefer to use a stop-loss order; others a put in this situation.

Again, a long-swing trader in the act of gradually distributing a large amount of stock at or near a price that seems satisfactory can hedge in other representative stocks and protect himself against a premature break in the market before he gets all his stock distributed.

In general, it may be said that one should always analyze and study every transaction as if there were no such thing known as the use of the hedge. There is ever present the danger that such devices will take the place of thorough investigation. Moreover, the method of hedging cannot be recommended to any but the experienced trader or investor. Its use on the part of any one else is of very doubtful value, to say the least.

XIV

THE BUSINESS OF THE ODD-LOT DEALER

Origin of the odd-lot dealer's orders. The odd-lot dealer's price: (1) market orders; (2) limited orders. Stop-loss orders and the odd lot. Odd-lot house organization. The short sale and the odd-lot business. The economic function of the odd-lot dealer.

THE constitution of the New York Stock Exchange fixes 100 shares as the unit of trading, unless otherwise specified. Section 2 of Article XXIII reads as follows: "All offers to buy or sell securities shall be for 100 shares of stock or for $1,000 par value of bonds, unless otherwise stated. Offers to buy or sell specified amounts, other than as above stated, may be made at the same time and may be independently accepted."

On the London Stock Exchange the unit of trading is 10 shares. The same is true of the Consolidated Exchange in New York. The amount of the unit is a matter of long development to fit the conditions of the particular exchange. The daily settlements on the New York Stock Exchange with its enormous volume would make the 10-share unit very difficult to handle, and the 100-share unit has for years been found well adapted to the methods and customs of the Exchange.

The demands of buyers and sellers of smaller lots were for some years met by specialists who bought and sold less than 100-share lots, that is, odd lots under special contracts as is still permitted on the floor of the Exchange. But as the specialists' business has developed, they have found it more profitable to confine their activities to trading in 100-share lots and multiples thereof and have withdrawn from the odd-lot field.

Parallel with the development of the demand for the

larger unit has advanced the demand for the odd lot. The increase of population, the tremendous increase in wealth of the country as a whole, the advance of knowledge about securities, and the extraordinary energy devoted to the development of quotation services, private wires, branches, offices, and correspondents of the New York houses have had as an almost inevitable result a flood of small orders pouring into the New York brokerage houses. Certain members of the Exchange saw here a field of growing opportunity in buying "full" lots and splitting them up to provide commission houses with lots to fit the needs of customers. To meet the demand of customers of commission houses who want to sell odd lots these members accumulate small, irregular lots until they have one or more "round" or "full" lots which they sell on the Exchange.

The development of the odd-lot dealers as a part of the apparatus of the Stock Exchange provides for the enormous odd-lot business and at the same time permits the machinery of the Exchange to function efficiently on a uniform 100-share unit basis.

ORIGIN OF THE ODD-LOT DEALER'S ORDERS

If John Smith wants to buy 50 shares of Union Pacific common, he calls up his local broker, a branch office or a correspondent of a New York commission house, and gives a buying order for 50 shares of Union Pacific at the market. The order is immediately transmitted to the New York office and from there to the floor of the Exchange. When the order reaches the telephone clerk of the New York house on the floor of the Exchange, he sends the order by tube to the proper post, directed to an odd-lot man stationed there who does the odd-lot business in that stock for the commission house. The odd-lot dealer executes the order and sends notice by tube to the telephone clerk who informs his house, and details of the purchase are sent to its interior office or correspondent, and the customer is

promptly notified of the transaction. The commission house gets its regular commission. If Union Pacific is selling on the market at 140, the commission on 100 shares would be $25, and on 50 shares, $12.50. The odd-lot dealer makes his profit on the price at which he quotes the odd lot. This feature will be taken up later in this chapter.

The odd-lot dealer does not come into contact with the public but depends on the commission broker to supply him with business. The odd-lot man buys the odd lots furnished by the commission brokers and sells accumulated stocks on the market. His profit arises in the difference between his buying price and the price he realizes on the 100-share lots on the market. On the selling side, he buys in 100-share lots and then sells odd lots to the commission broker for the account of the broker's customer, hoping to make a profit by selling higher than his buying price. He may reverse the order and sell full lots and later buy in odd lots for cover, or sell odd lots and later buy full lots on the floor of the Exchange.

THE ODD-LOT DEALER'S PRICE

The price at which an odd-lot dealer buys or sells stock depends directly on the quotations for full lots. Stocks are divided by the odd-lot dealer into two classes—"eighth stocks" and "quarter stocks." Eighth stocks are bought and sold one-eighth point from the sale price of full lots on the market or, if there is no sale, at the bid and asked price; quarter stocks are traded in at one-fourth of a point from the sale price of full lots, or one-eighth point from the bid and offer price. Most stocks are "eighth stocks." The "quarter stocks" are inactive stocks or stocks whose prices fluctuate so widely that trading on a margin of one-eighth would not allow the odd-lot dealer a satisfactory profit. Occasionally certain stocks are bought and sold on one-half point basis or "at discretion." If the dealer executed all stocks on the one-eighth point basis he would

be compelled to refuse to execute many odd-lot orders. Such discrimination against certain stocks on the board would not allow the smaller investor the present free market in every stock listed. Since inactive stocks sooner or later become active and active stocks become inactive, and since the prices of stocks now fluctuating widely may later become stable, or vice versa, stocks now listed as "quarter stocks" may some time later be classed with eighth stocks and, again, eighth stocks may be moved under the quarter-stock classification. Since the eighth stocks are the rule and the quarter stocks in the minority, there is need here only to give some of the best-known stocks which do not come in the eighth-stock class but are classed with the quarter stocks. Some of these are as follows:

Allied Chemical and Dye Corp., com. and pfd.
American Express
American Ice
American Locomotive, com. and pfd.
American Radiator, com. and pfd.
American Smelting and Refining Co.
American Sugar Refining, pfd.
American Snuff
American Telephone & Telegraph
American Type Founders Co.
American Water Works and Elec., 1st pfd. and 6% part. pfd.
Associated Dry Goods Corporation of N. Y.
Atlantic Coast Line
Atlantic Refining, pfd.
Baldwin Locomotive Works
California Packing
Chicago & Northwestern, pfd.
Cuban American Sugar, pfd.
Delaware & Hudson
Endicott-Johnson, pfd.
Foundation Co.
General Electric
General Motors Corporation
International Harvester, com. and pfd.
International Shoe Co.
International Telephone & Telegraph
Laclede Gas Co.

Mack Trucks, com., 1st and 2nd pfd.
National Biscuit Co., pfd.
National Cloak and Suit Co., pfd.
National Lead Co., com. and pfd.
Pullman Co.
Texas Gulf Sulphur Co.
Western Union, pfd.
Woolworth

1. *Market orders.* If Stewart, a customer of A. B. C. and Company, brokers, gives an order to buy 25 United States Steel at the market, the brokerage company transmits the order to the floor of the Exchange where it is routed by tube to an odd-lot man at the Steel post. The next sale of a full lot of Steel is made at 114. This price is the basis of the odd-lot price made to A. B. C. and Company. After the odd-lot dealer receives the order he waits until the next sale, which gives him the price, to which he adds ⅛ and sells 25 Steel at 114⅛ to A. B. C. and Company. A. B. C. and Company debit Stewart's account for the value of 25 shares of Steel at 114⅛ plus ¼ of $25, or $6.25 commission. If Stewart had ordered a sale instead of a purchase, the odd-lot dealer would have waited for the next sale, and then would have bought for his own account from A. B. C. and Company 25 shares of Steel at 113⅞, that is, ⅛ below the market. The brokerage house would have credited Stewart's account with the value of 25 Steel at 113⅞ less $7.25 ($6.25 for commission and $1 for stamp tax).

If Stewart, for some reason, did not want to wait for the next sale, he could have given his order "without waiting" instead of "at the market." In this case the odd-lot dealer would have sold 25 Steel to A. B. C. and Company at the offer price of Steel at the time the order reached him. A selling order "without waiting" would have been executed at the bid price at the receipt of the order. Suppose full lots of Steel were bid for at 114 and offered at 114⅛, then Stewart's buying order would have been executed at 114⅛ and his selling order at 114. In other words, the odd-lot

dealer would have sold 25 shares of Steel to A. B. C. and Company at 114⅛, or bought from the company at 114. If instead of United States Steel, Stewart had given an order to buy 25 shares of Baldwin Locomotive, a quarter stock, "without waiting," then the price given A. B. C. and Company by the odd-lot dealer would have been one-eighth from the bid and asked quotations. Suppose that at the time the odd-lot dealer at post Number 17, where Baldwin is traded in, received the order, Baldwin had been bid for at 112 and offered at 112¼. Then the dealer would have sold at 112⅜, and bought at 111⅞. Eighth stocks are traded in "without waiting" at the bid and asked prices; quarter stocks, at ⅛ above the offered or asked price and ⅛ below the bid price.

If Stewart had bought "without waiting," 25 Baldwin, the commission house would have charged his account for the value of 25 shares of Baldwin at 112⅜ plus $6.25 commission; if he had sold 25 Baldwin, then he would have been credited with the value of 25 Baldwin at 111⅞ less $7.25.

Buying or selling "at the opening" is subject to the same conditions as those enumerated above. If the market for Steel opens at 114, then the odd-lot dealer sells at 114⅛ and buys at 113⅞ and the customer of the commission broker who handles the transactions gets 113⅞ for his stock on a sale or pays 114⅛ on a purchase. If the market is active, resulting in a split opening, then the "fair" opening price is made the basis of the odd-lot dealer's quotations. When a customer of an inland office of a New York house gives an order to buy 25 shares of Steel at the opening, and the first quotation on the ticker tape shows 10,000 United States Steel at 114 to 115, the interpretation is that there was a split opening and very probably his stock was bought in at a "fair" opening price at 114½. His account with his broker then will be charged the value of 25 Steel at 114⅝ plus $6.25. In case of a sale, his account would be credited 25 Steel at 114⅜ less $7.25, commission and tax.

Orders to buy or sell "at the close" are based, as to price, on the final bid and asked price of the day. It is not possible to use the price of the last sale, which may take place an hour before the close at perhaps 75, and the closing bid and asked prices might be at 77-77½ or, perhaps, at 73-73½. To use 75 as a basis of the price at the close would not represent the market at the close at all. For these reasons the closing bid and asked prices are used or, in the case of quarter stocks, ⅛ below the closing bid price or ⅛ above the asked price.

If the closing bid and asked prices on Baldwin Locomotive were 112 to 112¾, then a commission broker selling 25 shares "at the close" for a customer would receive 111⅞ per share and if he were buying 25 Baldwin he would pay 112⅞ per share to the odd-lot dealer.

2. *Limited orders.* Stewart gives his broker an open order to buy 25 shares Anaconda Copper at 36. The order is forwarded to the odd-lot dealer at post Number 18. At the time the order is received, Anaconda Copper is selling at 37, so the dealer enters the order in his book to await a drop in the price of the stock. The drop comes after several days following a report of falling off of exports. Successive sales of Copper are made at 36¼, 36⅛, 36, 36⅛, 36, 35⅞, 35¾, 35⅞, 36. The order to buy at 36 signifies to the odd-lot man at post Number 18 that the commission broker's customer is willing to pay $36 per share but not more, and therefore he must deliver the stock to the broker at $36. In order to safeguard his eighth, he must buy at 35⅞. When a full-lot sale is made at 36 followed by another at 35⅞, he notes on his pad the fact that he sold 25 shares of Steel at 35⅞ plus ⅛. If the price had not gone below 36, Stewart would not have had his stock. When he saw 35⅞ on the tape he was sure his order was filled. Stewart's account with his broker was debited for 25 shares of Anaconda Copper at 36 plus $3.75. (Commission on stocks selling at $25, but under $50, is $15 per 100 shares.)

If Stewart had given an order to sell 25 shares of Anaconda Copper at 37, then as soon as the price had gone to 37⅛ his stock would have been taken by the odd-lot dealer at the post at which Copper is traded in. In other words, the odd-lot dealer would have bought the 25 shares at a price that would have allowed him a margin of ⅛ profit if he had a full lot and chose to sell it at the market. Stewart's broker, in this case, would have credited him with the price of 25 Copper at 37 less $4.75.

But there is no stock on which the market always varies by eighths between sales. The opening price may be many points from the previous close, or again the interval between one sale and the next may be a quarter point or more. Now suppose an open order to buy Anaconda Copper at 36, and the price drops from 36¼ to 35¾ from one sale to the next, at what price will the odd-lot dealer supply the stock? If the order were for 100 shares at 36, the broker would be bidding for the round lot at 36 and, of course, would get the stock at 36. Although the odd-lot dealer does not sell when the market is at 36 but at 35¾, which is ¼ below the order price instead of ⅛, the customary figure, yet the broker demands 36. It is sometimes said that in a case like this the customer should have the benefit of the break in the market, getting his stock at 35⅞, which still gives the odd-lot dealer his customary eighth. The odd-lot man replies that if the stock were supplied by himself at 35⅞ the customer would get a better price on the small lot than if he had ordered a full lot which would have been bought in at 36. Custom has decided in favor of the odd-lot dealer's point of view on this matter.

The same custom would hold if the order should authorize the broker to sell 25 shares of Anaconda at 37 and the market should advance from 37 to 37⅜ at one step. The customer would get 37 for his stock and the odd-lot dealer claim ⅜ instead of the regular ⅛ margin. The dealer's justification again is that if he took only his ⅛ margin and bought

the stock at 37¼ the customer would get ¼ point more than the customer who ordered the sale of a round lot at 37. His stock would have been sold at 37, the price at which his broker would have been offereing it on the market.

If the open order to buy 25 Anaconda at 36 had not become effective because the price did not get as low as 35⅞ on the day on which it was given, and on the next day the market had opened at 35½, making the order effective, then the rule is to make the price 35⅝ to the commission broker, who, of course, charges his customer the same figure plus his commission. A similar rule holds for limited selling orders that are executed at the opening. Custom may be said to give the dealer the benefit of a break or advance in price except that the benefit of a break or advance at the opening accrues to the customer.

STOP-LOSS ORDERS AND THE ODD LOT

The rule which applies here is that a stop-loss order on an odd lot is executed at ⅛—¼ for quarter stocks—from the next sale of a round lot that makes the stop-loss order effective. If an odd-lot dealer has an open order to sell 25 shares of Pacific Oil at 60 stop when the 100-share lots are selling at 60⅛, he will wait for a sale at 60 and quote his price to the commission broker who furnished the order at 59⅞ when the sale materialized. If the price should drop from 60⅛ to 59⅛ between two sales his price then would be 59, that is, ⅛ under the 100-share lot price which made the stop-loss order at 60 effective.

If the same dealer has an open order to buy at 61 stop and the price now is 60⅛ he will await a rise in the market to 61 when he will deliver the stock at 61⅛. If the market should go from 60¾ to 61½ at one advance, he would deliver at 61⅝.

To sum up, the method of determining the price of odd lots may be expressed as follows:

1. Orders "at the market" including orders "at the opening" are priced at ⅛ or ¼ from the price on 100-share lots.

2. Orders "without waiting" are executed at the bid or asked price for "eighth stocks" and at ⅛ from the bid or asked price for "quarter stocks."

3. Orders "at the close" are executed at the bid or asked price at the close for "eighth stocks" and at ⅛ from the closing bid or asked price for "quarter stocks."

4. In the case of limited orders the customer always gets execution of his order at the price named in the order, except that orders executed at the opening give the benefit of wide fluctuations from the price named in the order to the customer.

5. Stop-loss orders in case of odd lots are always executed at ⅛ or ¼ from the first full-lot sale which makes the stop-loss order effective.

ODD-LOT HOUSE ORGANIZATION

The odd-lot dealer buys in 100-share lots and retails the stock in lots varying in size from 1 to 99 shares, or, on the other hand, he buys in odd lots and sells full lots on the floor of the Exchange. The nature of this kind of business makes it very expensive. The tremendous number of small lots handled necessitates a large office force housed in ample quarters. The matter of bookkeeping alone in a large odd-lot house employs several hundred clerks. Besides the bookkeeping there is the endless task of splitting up and transferring of certificates from 100-share certificates to less than 100-share certificates and again the accumulation of the certificates of small denomination and their transfer into 100-share paper. This part of the work alone requires a large and well-trained staff. The third task is the matter of clearing the thousands of items bought and sold every day. Since the Clearing Corporation clears no certificates of less than 100 shares, the odd-lot house must do all its own clearing.

It is estimated that 25% of all the business done by members of the Exchange originates in odd lots. Less than half a dozen houses specialize in odd lots. In October, 1925, on busy days, these large houses did an odd-lot business amounting to approximately 500,000 shares. The two leading firms have 12 and 10 members, respectively, on the floor of the Exchange. Besides their own members these firms employ "associate brokers" who trade exclusively for the firm which employs their services. One of the largest firms employs 27 "associate brokers." Several of the firm's members of the Exchange are "free lance" brokers who go from post to post giving their aid where needed. Other members of the firm and the "associated brokers" are located at designated posts and are sometimes called "fixed post specialists." When memberships on the Exchange are selling at $150,000 or more, the investment involved in the required membership is thus very great.

A very important and very considerable task of the odd-lot house is the matter of adjustments. As would be expected where the public is so generally involved, many misunderstandings arise. It is the settled policy of the odd-lot house to do everything possible to satisfy the customer of the commission broker who gets the business for the dealer. To accomplish this aim a department is established to take care of this work exclusively. Much misunderstanding arises in connection with price quotations. To be able to deal intelligently with such complaints the clerk at the telephone booth stamps the time of receipt of the order on the floor before sending it to the odd-lot dealer at the proper post. In the office of the odd-lot house a stamping clock stamps the tape minute by minute as the tape passes through. A comparison of the time stamped on the order and the time stamp on the tape usually locates pretty exactly the 100-share sale on which the odd-lot price was based. In trying to locate the sale on the ticker tape the mechanical limitations of the ticker must always be allowed for. In times of great activity the capacity of the ticker is not adequate to the demands on it

and the latest quotations on the tape may represent transactions that actually took place many minutes before. Again, in an active market, "bunching" of sales often occurs so that a number of sales of the same stock are recorded as if they took place on the floor of the Exchange with no other sales intervening, when as a matter of fact other sales did intervene. The reason for the "bunching" is that the operator who puts the sales on the tape gets reports from the four stations on the floor and in an active market can do nothing but put the report from each station on the wires as they come in, thus running the sales of one stock together, followed possibly by a running together of the sales of some other stock reported from another station.

The customer of the commission house watching for the sale on which the price for his order is based must, therefore, allow time for the order to be sent to the floor and its arrival in the hands of the odd-lot dealer, for time which the tape is behind the market, which varies from a few seconds to many minutes, and also for the fact of bunching sales on the tape.

THE SHORT SALE AND THE ODD-LOT BUSINESS

The risk involved in the odd-lot business is very great, and losses must be kept at a minimum. The risk due to inactivity or wide fluctuations in price is met by a higher margin than is usually asked; for example, inactive stocks, like many preferred and a few common stocks and active stocks like Baldwin Locomotive and others, require a margin twice as great as active and more stable stocks.

Odd-lot houses use the short sale both to protect themselves against loss and to render quick and full service to their customers. At times an odd-lot house accumulates large amounts of stock and can easily supply all buyers, but at other times it has no stock of the kind wanted on hand to sell to customers. The only way quickly to fill orders to buy is to sell short, expecting to buy in later. In a declining market an odd-lot house that kept an adequate supply of stock

to fill all buying orders would find itself in constant difficulty. It avoids the risks of a declining market by going short and later buying in the stock. In a rising market the house will be accumulating stock to sell to customers; in a declining market it sells short and accumulates stocks from customers and by purchases on the market to cover. The house plans to accumulate stock and sell it at ⅛ to ¼ higher, or to sell short and then buy in at ⅛ or ¼ lower. Every purchase and sale involves a risk, but by good management the ⅛-point margin has been found sufficient to cover losses and render a profit to the house in the long run.

THE ECONOMIC FUNCTION OF THE ODD-LOT DEALER

The odd-lot system of the New York Stock Exchange enables the small investor to buy or sell stock at within a fraction of the same price at which large lots are traded in. Moreover, the keen competition among odd-lot houses has created a continuous market for small lots, so that there is always a market ready to supply or to absorb any securities which the small investor or speculator wants to buy or sell. Marketability and enhanced collateral value are thus assured for small lots on a footing equal to that of large lots.

The odd-lot business affords the means of diversification to the small investor. His funds are not adequate to buy in 100-share lots the stocks of a variety of corporations, but they are sufficient to buy 10-share lots of 3 or 4 or more companies and thus get the benefit of safety of principal and income that diversification effects. An investor with a large part of his funds placed in bonds may want to increase his income. Without adding an unreasonable risk he can buy into a variety of very good stocks by purchasing odd lots.

The odd-lot system of the Exchange makes it possible to obtain a large distribution of a corporation's stock to thousands of stockholders. The results of such a wide distribution are beyond calculation. In the first place, the smaller saver is given a chance to share in the growth of industry

and so is encouraged to thrift and economy. In the second place, a wide distribution of stock makes a stable market for a stock. The general principle that a wide market tends toward stability applies here as well as to any other market. Again it has been said that at the peak of a bull market a great number of small selling orders come into the market, helping to stop the upward movement, and, on the other hand, during the decline and depression period many odd-lots are bought, helping to keep the decline from going to extremes otherwise possible. This will be true to a greater and greater degree as the public becomes informed on financial matters. For the present, it still seems true that the public buys at the top and sells on the decline to no insignificant extent.

Widespread ownership of stock among the public, it is believed, will do much to destroy radical and destructive economic doctrines that find fertile soil in those not having any definite financial interest in the prosperity and dividend-paying power of any important enterprise. Widespread stock ownership should create an interest in the stability and prosperity of business generally and in the companies whose stock is owned, specifically. It should create general good-will and understanding on the part of the public toward the industrial organization. The education of the public in the problems involved in business and in finance will be greatly stimulated by an actual and definite interest in the business of the country. Through the small lot we are getting co-operative ownership of industry by the public much more rapidly and effectively than we could hope to get by any other plan proposed.

XV

TAPE READING AND CHART TRADING

Tape readers: (1) the tape reader trades on short movements; (2) the tape reader's attitude toward news; (3) the theory underlying the tape reader's operations; (4) forecasting trends; (5) the use of charts. Trading for the minor swings. The chart trader. The major-swing trader.

THERE are various general methods of trading. Each method is represented by a type of trader. We thus have the tape reader, the chart trader, and the trader who uses few if any helps but depends on his own experience and skill at interpreting the market.

TAPE READERS

Some of the most prominent traders in New York have been, at some time, so-called tape readers. Among these are numbered James R. Keene, Jacob Field, and Jesse Livermore.

The tape reader spends every day at the ticker watching the tape with most careful attention. Any moment the tape may show the beginning of a move upward or downward which is weighted with opportunities for making money. The tape reader, to be successful, should devote his whole time to studying the tape. He should have no business calling other than watching the tape.

1. *The tape reader trades on short movements.* The hour-to-hour fluctuations in prices are the subject of his study and trading. He picks the active market leaders and largely confines his trading to them. He prefers to close up his trading each day so as to be neither long nor short overnight. "A simon-pure tape reader does not care to carry stocks

overnight," says one of their number. Moreover, this procedure saves interest charges. He limits his losses to a minimum and is always ready to make a turn if the tape gives the signal that the market is about to reverse itself. He is satisfied with one-eighth of a point and seldom tries to get over two to three points before he closes out. Small profits, minute losses, and large turnover are his ambition.

The tape reader denies that he is a scalper when he takes an eighth profit. "The latter (the scalper) is essentially one who tries to grab a point or two 'without rhyme or reason'—he doesn't care how, so long as he gets it. A scalper will trade on a tip, a look, a guess, a hearsay, on what he thinks, or what a friend of a friend of Morgan's says."[1]

The tape reader, on the other hand, tries to reduce his trading to a science, ultimately depending on the law of averages. He is interested in the longer swings that move from 5 to 10 or 15 points only as giving the general framework within which he must operate. For example, if he knows that the trend for perhaps the last two weeks or month has been upward for a gain of 10 to 12 points and the market shows signs of a temporary reversal of trend, the trader will expect a reaction of 5 or 6 points. Again, after the reaction of the 6 points anticipated in a bull market the trader will expect the price to move above the point attained previous to the reaction and will adapt his trading on temporary fluctuations to these larger movements.

2. *The tape reader's attitude toward news.* The news comes on the tape a relatively long time before it gets into the newspapers, and is always some time ahead of the news tickers. The decisions of courts, of boards of directors, of commissions, and so forth, are acted upon by people who have special opportunities to get actual inside facts before such news gets on the wires or into print. Often news is given out in such a way as to mislead. But the ticker records immediately the transactions of those who know the facts, and

[1] Wyckoff, Richard D., *Studies in Tape Reading*, p. 15.

the tape reader sees the effects on stock prices and acts according to the clues there given. The tape tells the news accurately and in plenty of time for the tape reader to get into the market before the news comes out. So reasons the tape reader.

The tape reader thus has no ear for rumors, gossip, tips, newspaper opinions, or stories. None of these mean anything to him, for if they have any foundation the ticker has already told the story. If he uses news at all it must be something important and then he uses it only as a guide to judge the technical condition of the market. If the market remains strong when important bad news comes out, he knows that the people holding the stock do not need to sell and are not easily scared into selling. The stock is in strong hands. If bad news causes a sharp reaction, he knows the market position is weak. To most tape readers the news is merely a distraction, like the gossip and rumors of the board room. The genuine tape reader wants to be alone with his ticker so he can concentrate on the movements of prices of the various stocks. He must watch not only one stock but the movement in perhaps many other stocks. Stocks move differently and have their own characteristics and relationships to other stocks. He must know these, for a short movement in New York Central may be a forerunner of something in Union Pacific, or vice versa.

The trader studies the management of the different leading corporations represented on the tape, gets all the data he can as to their earnings and outlook, and the movement of business in general. He wants statistics, facts, knowledge, but he uses these only as a sort of background and never lets them take the place of what he sees on the tape. They help to interpret often what comes out on the tape, but the tape is primary.

3. *The theory underlying the tape reader's operations.* The law of supply and demand is basic in the changes in stock prices as absolutely as in the price movements of com-

modities. There is no exception to this law. In a world as intricate and complex as ours, no man or set of men is wise enough to interpret the many cross currents. When to these are added the uncertainties that are injected into the market by manipulation, a sure interpretation, especially of the short fluctuations, is impossible. But all these cross currents and forces of manipulation result in a demand and a supply of stock on the market that can be interpreted in price terms. An attempt to distinguish and weigh the infinite number of forces that play on the market is impossible, but when these forces crystallize in supply and demand on the market something tangible is before the tape reader with which to work.

Now, it is a fact that for a period demand will be in the ascendency and drive prices up, then follows a period in which supply is catching up with demand and finally the two forces may be said to be in equilibrium. This period of equilibrium may be only momentary or it may last for hours or perhaps days. Then one or the other force wins, and the movement in the price of the stock concerned is on again. The critical points in tape reading have to do with the interpretation of these periods of equilibrium. Once the price movement has come to a resting place, what will it do next, and with what degree of velocity?

4. *Forecasting trends.* The tape reader selects one or two or three active stocks. They must be the leaders of the market with sales running at one-eighth intervals. The trader who tries to trade in 10 or 12 stocks invites failure from the beginning. No one except the long-swing trader can trade in but 2 or 3 stocks. These select leaders have their own characteristics; the moves in one may be quick and impulsive, and in the other tardy and phlegmatic. The trader must know without fail his leaders and must know also the habits of many other stocks and their reciprocal influences. Only in this determined, unflagging, painstaking work lies success.

Long time of careful trading and study gradually de-

velops a kind of common sense and judgment of the market for the leaders that enables the trader to follow the market with a high degree of accuracy. Successful tape readers insist that above all things the trader must develop a dispassionate attitude toward the tape, so that he is not affected by his hopes and fears, but can sit at the ticker unperturbed when the market goes against him and view the facts coming out on the tape with cold incisive judgment, attempting to discern what the next movement shall be. The same must be true when the market goes in his favor, for now he is subject to overconfidence which blinds him to the warning signals that may already be appearing on the tape. Overtrading and overstaying the market are the sins that beset the too optimistic trader.

Tape readers place large significance in what they call resistance points, double and triple tops and bottoms, and reciprocal influences of the various stocks, especially the leaders, upon each other. Volume is also one of the important indicators.

The trader keeps at his tongue's end the prices at which recent tops and bottoms were made. These are points at which buying support was given the stock, if at the bottom, or at which selling pressure came upon the market if at the top—that is, these points are resistance points. Again if, say, Steel goes to 115⅛ from 112½ and then drops back to 115, 114⅞, 114½ and then works up to 115⅛ again but then drops back to 114¼, rallies to 115, and again declines, and if Union Pacific and New York Central are also showing similar signs of weakness it is time to sell. The reason is that Steel made a double top and in its third attempt failed to reach the former tops. This indicates that there is more selling as the price approaches 115⅛ than buying, and if there is nothing in the other great stocks to lend support, Steel will surely succumb to selling pressure. After Steel has declined several points, a resistance point will again be met where buying and selling are at equilibrium. Assuming that Steel declines to 112 and rallies to 113½ and then de-

clines to 112, followed by a rally to 114 and then a decline to 112¼, it is probable that Steel is about to go up for a good profit to those going long at once. Steel has made a double bottom and on the next decline has met resistance enough to support it above the previous lows. If other leaders are weak, however, their influence may be great enough to drag Steel down. If they are strong, Steel will advance. The double tops and bottoms are resistance points and indicate turns in the market. An illustration of double tops and resistance points is given in Figure 7.

A triple top or bottom simply means that rallies have carried the price up three times, or that reactions have depressed the price three times, but in no case has the price gone higher than at the previous rally or lower than at the previous reaction.

That the action of the market is not standardized to any form is a matter of course, and much care must be exercised in comparing the action of the stock in question and that of the other leading stocks.

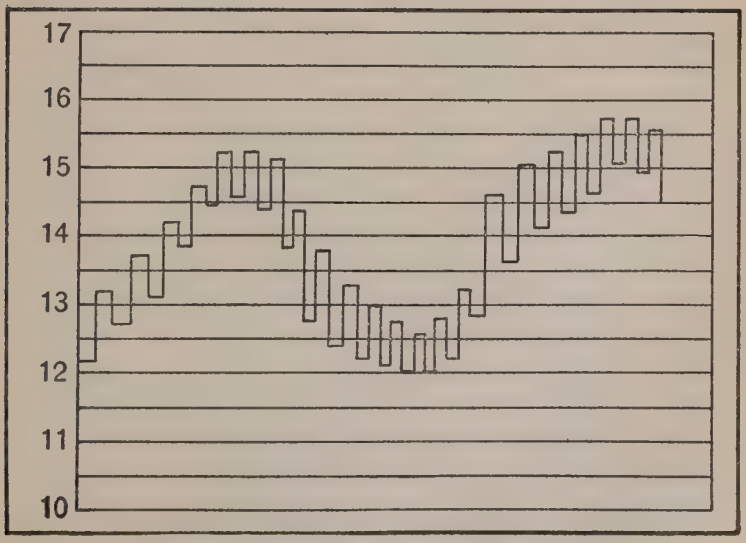


Figure 7: Double tops and double bottoms.

As has been said, volume is considered of much significance in reading the tape. The trader is always interested in knowing whether the stock is being accumulated or distributed. If he sees a series of trades on the tape, with the larger volumes at the higher prices and the smaller amounts at lower prices he at once is warranted in scenting accumulation. If the larger volume is at the lower prices, distribution seems to be going on with weakness to follow. The trader knows too well that a stock may be briskly bought to make the market as a whole appear strong, while under cover of this strength other stocks are unloaded. He, therefore, examines the volume in other stocks to see that the larger volumes are at the higher prices. If he finds the larger volumes at the lower prices, he suspects distribution under cover of the strength of his stock and at once knows that this strength will be temporary. Also, a certain leader may be sold in relatively large volume to cover up accumulation going on in other stocks.

Again a comparatively large volume often marks the turning-point in a movement. As the advance proceeds, it takes an extra large volume of sales to stop it. The same is often true of the bottom, the decline being stopped by unusual volume of buying. A stock that has been slowly gaining eighths and quarters on transactions little larger than usual may suddenly be run up with greatly increasing volume. This is frequently the culmination of the upward move. Or, a stock may be gradually declining on something like the usual volume, when suddenly a large supply of shares drives the market down to a resistance point, and the turn is in sight.

The effect of the law of supply and demand is fundamental. The force of supply is always matched against that of demand. Suppose a stock is advancing under its usual volume. This means that stock is firmly held with a limited supply coming on the market. Now, as it advances, a much larger volume of buying shows but little advance,

and then under the same volume the advance stops, followed by some weakness. Here supply is overbalancing demand, and a turn in the temporary trend has come, for the pressure of supply is too great for the supporting power of demand.

5. *The use of charts.* The tape reader has little time to keep a chart of each price change as it is registered on the tape. His attention must be centered on the tape. Moreover, a chart of a stock gives only the movements of the market on that stock. The tape reader puts great emphasis on the reciprocal influences of various stocks on each other. A chart does not indicate the interaction of stock prices at all.

Charts, however, may be made before and after market hours from the published transactions of the Exchange. The main use of the chart is to show points of resistance and periods of accumulation and distribution. The chart is used simply as an aid to the memory and as a help in interpreting the larger movements into which the trader for the temporary fluctuations must adapt his trades. Each trader has his own preferences, but a type of chart well suited to the tape reader's purpose is the full-point figure chart. The figure chart can be properly constructed only when every transaction on the floor is noted. Fractions are not recorded in the chart, only the nearest integer is set down. The following is a figure chart of Southern Railway for some weeks prior to September 25, 1920.

This chart shows that at 26 and 25 there was plenty of stock offered, again at 23 the supply was too great for the demand, and again at 21 before the turn, when demand

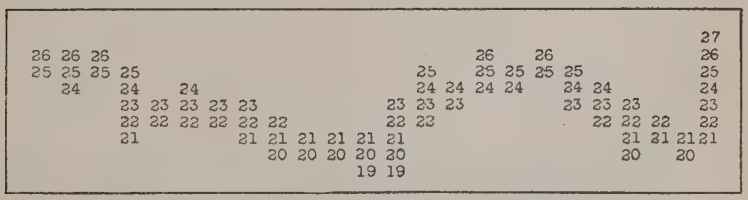


Figure 8: Full-point figure chart of Southern Railway.

again outran supply. After the stock had reached its low of 19, and then broke above 21, the trader could see that the supply of stock was being withdrawn relatively to the demand, and when the reaction from 23 held at 22 he was sure of an advance. He expected the advance to hesitate at 26, the former top. He did not blindly follow the chart but watched the tape to get indications of a reaction. It came with a double top and then the expected decline. It cannot be too often repeated that the tape reader who uses a chart uses it only as an indicator of turns in the market and does not follow it unless its forecasts are seconded by the tape.

Below is an interesting full-point figure chart of United States Steel for some time previous to November 15, 1920. It shows a supply of stock put on the market at 90, 89, and 88. At these figures distribution was going on.

In concluding the discussion of the work of the tape reader it may be said that his work is most difficult and exacting. Only a few make a success of it, but these fortunate few find it quite worth their while. The unsuccessful are eliminated or hang on, scarcely able to make expenses. The successful sooner or later give up the close, confining work of concentration of attention on the tape for other types of trading quite as profitable, if not more so.

TRADING FOR THE MINOR SWINGS

This type of trader operates for the advances and declines of 5 to 10 and perhaps 15 points. The tape reader sometimes graduates into this class of trader. The short-swing

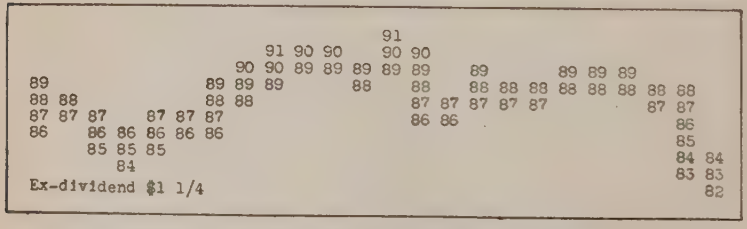


Figure 9: Full-point figure chart of U. S. Steel.

trader is not interested in the hour-to-hour fluctuations. The technique of trading and the general principles of predicting the price movements are about the same, and so the successful tape reader simply applies the methods employed on the momentary swings to interpreting the larger movements.

The minor swings have their origin in news that has a temporary nature and in what is known as the technical condition of the market. Success in short-swing trading depends largely in properly interpreting the technical condition. This subject will be discussed somewhat at length in a later chapter, and therefore nothing further need be said here.

Several statistical services attempt to give their clients advice as to the turning-points of the short swings of the market. These services are claimed to be the result of years of study of market conditions and large experience in actual trading. Usually a statistical index is made from data considered of critical significance. These data and the methods of handling them are, of course, kept a secret and for the same reason that a manufacturer of chemicals or dyestuffs keeps his formulas secret. One of these services announces its trend indicator as constructed so as to indicate the "degree of resistance encountered by price movements." The theory is that as prices decline after a certain point is reached, buying power comes into the stock, showing resistance to decline. On the other hand, as prices advance, more and more stock is put on the market for sale, increasing the pressure against the advance. Now, a properly weighted index of the right combination of essential factors will indicate the degree of resistance or pressure and locate turning-points in the advance or the decline.

Many traders frequenting the customers' rooms of brokerage houses throughout the country trade in this fashion. Also, many traders seldom seen at a broker's office trade on the minor swings by means of the telephone. Much of the trading on the minor swings, as well as much of the

trading by so-called tape readers, is little more than gambling. Any successful trader, whether tape reader or operator on the minor swings, will affirm this statement without qualification.

THE CHART TRADER

The simon-pure chart trader sticks to his chart even more faithfully than the tape reader stands over the tape. There are, or at least seem to be, as many systems of chart reading as there are chart traders. Some chart traders are primarily interested in the minor swings, others in the longer swings, that is, the larger movements that come perhaps once each year.

The interpretation of charts is based on the belief that history repeats itself, that stocks for the most part are put up or down by the large interests and that these interests act according to a more or less definite plan. The chart shows the past activity of these inside interests, and by its help the future activities of these interests can be predicted if only the chart is correctly interpreted. Chart men usually have little use for the news. They see by the action of the price of the stock as shown on the chart whether the stock is being accumulated by inside interests or is being distributed by them to the general public. If a stock is in a weak position the chart shows it, if in a strong position this fact will likewise make itself apparent. One writer who, by the way, is not a hard-and-fast chart trader, has this to say as to information on corporations and facts about the market: "It is all well enough to know the history of a company, whether it is old or new, its earnings over a long period of years, how long it has paid dividends, and its future prospects; also whether it is overcapitalized or whether the capitalization is conservative or not. But all the information that affects the future price of the stock is contained in its fluctuations and you need nothing more than its record of prices."[2]

[2] Gann, W. D., *Truth of the Stock Tape*, p. 51.

The genuine chart man makes his chart a sort of fetish. It is his Alpha and Omega, the beginning and the end of his wisdom marketwise. Not only are the prices of individual stocks charted, but average prices of groups of stocks representing an industry, and the average prices of representative stocks indicative of the market as a whole.

The time factor is of large significance in interpreting the chart so as to foretell future advances or declines in prices. Usually one will find that a chart trader has marked in red ink points to which the price will advance or, perhaps, decline at a given date. The advance or decline is based on previous tops or bottoms. Various systems are used to locate the exact date on which the tops or bottoms will be made by the stock. A system used by not a few chart men is based on Hebrew chronology with its signs and seasons, festivals, sacrificial days, and golden numbers. This system is claimed to trace back to J. R. Keene, the noted Wall Street speculator. The following is a statement which is typical of replies the writer has received from various chart men: "Many people want to know what method I use to determine future indications on the markets. I keep charts of the various active stocks and also a set of averages. My charts are different from the charts kept by the average statistician, because they are based on a discovery of my own. I have discovered a 'time' factor that enables me to determine important tops and bottoms months or more in advance."

The chart trader has a whole arsenal of weapons which he uses to bag profits. He deals much in resistance levels, sharp, double, and triple tops, volume, weak and strong position of the market, the time factor, supply and demand, insiders, pools, manipulation, and so forth.

The tape reader, as well as the investor, asserts that no chart man ever succeeds as long as he is a true chart trader. Their contention is that no mechanical means has yet been found, nor will it ever be found, by which the price movements can be forecast with any degree of reliability. A

partner of a well-known brokerage house in reply to a question as to the success of the chart trader said, "I have never seen one yet who did not have his pants frayed out at the shoe tops."

Of course, nothing said here against chart trading as such should be construed to mean that a set of properly kept charts cannot be used as a valuable aid in buying and selling, especially by the major-swing trader or investor.

THE MAJOR-SWING TRADER

The traders who operate to take advantage of the large movements are the men who are, on the whole, the most successful. These traders are men of wealth and buy stocks in large amounts at low prices and carry them unmindful of the minor swings until the price has advanced 30, 40, 50 points and more. It may take a year or two years or even more to develop such a rise, but they are willing to wait. They usually are engaged in large enterprises of one type or another and trade in the stocks of their own corporations, or in corporations with which they have close connections. Their broad interests in industry compel them to be close students of economic conditions, and realizing that basically these control the long swings of the stock market, they use their knowledge of business movements in the matter of investing and trading in securities.

These men are the large money makers of the market. They do not frequent brokerage houses and may never be seen in a customer's room. The manager of a brokerage house in one of the middle-western cities told the writer that he had never seen his largest customer. Traders who frequent customers' rooms are always on the alert to learn what these big men are doing. They are always ready to follow the leaders. A group of men seeing an opportunity to make a good living off the ordinary trader has developed a system of collecting or manufacturing tips and selling them to the gullible small trader. These tipsters frequently

TABLE 17

HIGHS AND LOWS OF LEADING STOCKS

	Low 1905	High 1906	Low 1908	High 1909	Low 1914	High 1916	Low 1920	High 1923	Low 1924	High 1925
Union Pacific...	113	195	100	219	112	153	110	1922 154	1923 124	153
Can. Pacific....	109½	201	140	1912 283	1915 138	183	101	160	1923 131	156
Del. and Hudson	178½	234	123	200	138	156	83	141	105	145
Atchison.....	.....	110	66	125	89	108	76	1924 120	97	140
N. Y. Central...	.....	174	89	147	77	114	64	1924 119	99	137
U. S. Steel.....	1904-5 8⅝	50	1907 21	94	1915 38	1917 136	1921 70	109	1923 85	139
A. T. & T.....	1901-5 186-117	1906 144	1907 88	1911 153	110	134	92	1924 134	121	145

play into the large traders' hands through the misinformation they spread about.

These big men, called the "insiders," have inside and advance information as to management, earnings, and future developments in the particular stocks at interest. They are said to put stocks up and to put them down. What they really do is to buy stocks when they are cheap and sell them when they are dear.

These men are not watching the market every hour, though they keep daily tab on its movements. They do not buy and sell by the indications of a chart. Fundamental factors are their guide. Now the man of small means cannot much affect the prices of stocks, but he should follow the method used by these large traders. The fundamental factors affecting the corporation's earnings and the business and stock market situation in general must be studied carefully and stocks must be bought when cheap and sold when dear. If an investor buys at the time of a depression following an unmistakable crisis when stocks are on the bargain counter and sells when there is a boom, he will in a course of years accumulate a considerable fortune. Now the long-swing investors of the wealthy class often get into an industry at its beginning. They are personally acquainted with the management and have many sources of information so that they can keep in close touch with the growth of

the corporation. On this account they take a much smaller degree of risk than would a small investor who has no means of accurate and timely inside information. Getting in on the ground floor when the stocks can be acquired very cheaply, they make very handsome profits as the business develops. To be sure they take large risks, so large that the small investor would not dare to risk his savings, even under the same circumstances. He must keep his funds in more conservative securities.

The possibilities of profit in store for the careful major-swing operator may be gathered from the illustrations given, in Table 17, of the width of the fluctuations in the very best stocks.

XVI

AVERAGING AND PYRAMIDING

Averaging. Use of averaging by different types of traders: (1) the office trader; (2) the short-swing trader; (3) the long-swing trader or investor. The technique of averaging. Pyramids: the theory of pyramids. Averaging down or marking down costs. Stocks suitable for pyramiding. The use of the stop-loss order to protect a pyramid.

THESE two methods of operating in the market are brought together in this chapter as a study in opposites. By averaging, the operator aims to reduce his average cost or to increase his average selling price by going opposite the trend of the market at the time of the buying or selling procedure. The ultimate purpose is a maximum profit with a minimum loss.

The operator who pyramids has the same aim. In fact, he expects to realize very handsome profits. His method is to follow the trend, buying on the way up or selling on the way down.

Both methods are useful when utilized by skilled traders. Both methods, whether on the long side or the short side, may be extremely costly if not most carefully guarded.

AVERAGING

No one can invariably get into the market at the bottom and get out at the top. Traders knowing that very often the market declines more or less after they have bought sometimes give their broker an order to buy on a scale down. For example, an operator thinks that United States Steel is as low as it will go after a decline of 10 points to 105, but he also knows from experience that he may not judge correctly, and that Steel may go to 102 or perhaps lower. He, therefore, gives an order to buy 20 shares at

105 and an additional 20 shares at each point on a scale down. If Steel goes to 101, he will have acquired 20 shares at 105, 20 at 104, 20 at 103, 20 at 102, and 20 at 101, a total of 100 shares at an average price of 103. If he had bought 100 shares at the market or on a limited order at 105, his shares would have cost him much more money. By buying on a scale down he averages his price down. If a turn in the market should take place, the operator can get out without a loss on a rally to 103.

Sellers of stock are subject to the same limitations in getting the top price as buyers in getting the bottom figure. Suppose Steel has worked up to 125 for a gain of 20 points. The holder of stock thinks this is about the top, but, lest he misjudge, he orders 25 shares sold at 125 and 25 additional each point up until 100 shares are sold. By this method his stock nets him $127.50 per share as against $125 if he had sold at what he judged the top.

USE OF AVERAGING BY DIFFERENT TYPES OF TRADERS

Each trader has his own peculiar conditions to meet, and he uses the different means provided to suit these conditions.

1. *The office trader.* The trader for the hour-to-hour and day-to-day fluctuations in prices has little use for scale trading. He prefers to buy at the market and sell the same way. Averaging fractions confuses him. Moreover, it is doubtful if this method of trading, at its best, would be of any value to him. He trades many times each week, and the average of the prices he pays, sometimes at the bottom, sometimes a fraction away and again a point or more away, most probably, over a period of time, will be about the same as if he averaged on every transaction. The law of averages covering many operations will work out about the same result as if scale trading were used.

2. *The short-swing trader.* The trader who tries to make a living out of the technical rallies and reactions must trade

relatively often and taking the trader's operations month after month and year after year the law of averages will work the same as was suggested above in the case of the office trader. The trader for the short swings will occasionally hit the bottom, occasionally within a fraction of the bottom, occasionally several points away. Month by month, over a period of years, there is, therefore, no advantage in using the method of averaging, considered merely as a mechanical device. Moreover, the method has its own defects. If a trader has funds sufficient to margin amply 100 shares and decides to buy on a scale down 20 shares for each point, but the market begins to advance after the first 20 shares are purchased, there will be a large amount of capital idle.

On the whole, the short-swing trader, because he is constantly keeping in close contact with the market, had better use a stop-loss order on buying. If his judgment proves wrong, the stock will be sold, and he can then get into the market again lower down.

As a piece of trading machinery, it may be said the method of averaging does not commend itself very favorably to the short-swing traders. These traders favor pyramiding, rather than averaging, as a usual method of procedure. The trader who pyramids goes with the trend, while the trader who averages is bucking the trend and it is a rule of trading never to buck the trend. The trader who buys on a scale up, that is, who pyramids, always keeping himself well protected by stop-loss orders, steps in harmony with the trend. He takes no chances on an expected turn in the market as the trader who buys on a scale down must do.

It must be said that the psychological effect of the method of averaging on the trader is favorable in several respects. In the first place, it prevents overtrading. A trader may feel too optimistic and buy too much if he makes a single purchase, but when he buys 50 or 100 shares and then another 50 or 100, and the price keeps declining, he is likely

to cut down his purchases because his optimism has received a severe check.

In the second place, the fact that one is long on stock makes him see every event in the light of his wish that the market will advance. If one has bought a large amount of stock he will hold on, expecting the market to come back. The loss is too great to accept. If, on the other hand, the stock was being bought on a scale down a rally only half as great is needed to prevent a loss and if the rally does not come the loss is not so great and, therefore, will be taken more quickly than if the full amount of stock has been bought at a higher figure.

3. *The long-swing trader or investor.* The long-swing trader can use the method of averaging to very good advantage. He accumulates his stock over some days or weeks or months and then holds them until a major upswing of the market is about completed. It seems to be the general opinion of brokers that investors who use the method of averaging down in buying make on the whole the largest net profits.

The investor is not a student of the short swings, due to temporary conditions of the market, which are often entirely manipulative in origin. He is, however, a close student of fundamental conditions. After a long decline the investor decides that the fundamental outlook is such that the stocks in which he is interested should be bought. He knows that there is no hurry because there will be a period of rallies and reactions before the real bull movement starts. An investor calculates that at 95 United States Steel should be bought. He also knows that in all probability there will be technical reactions that will carry Steel below this price. The way to take advantage of these reactions is to buy on a scale down during technical declines. Large amounts of Steel may thus be accumulated, during some weeks or months, at a very favorable margin below the estimated value.

The method of averaging by selling on a scale up may be used after the market has had a long rise and begins to show

signs that the end of the bull movement is near an end. The use of selling on a scale up at the top of a bull movement does not find as much favor as buying on a scale down in accumulation. Many conservative investors advise against selling on a scale up and advocate taking profits when the fundamental investment situation shows evidence that a reverse is near.[1]

THE TECHNIQUE OF AVERAGING

Suppose an investor has funds sufficient to buy outright 500 shares of Southern Pacific. There has been a sizable decline and the price at 90 looks very attractive, the fundamental factors and the market situation both being in a strong position. The price at 90 appears to have discounted all the unfavorable factors in the investment situation. The investor accepts 90 as the low point and then places a point at 85 as the lowest price to which Southern Pacific could possibly go.

The problem, then, is to distribute the 500 shares over the 5 points of decline. He, therefore, gives an order to buy 100 shares at 90 and an additional 100 shares at each point down until 500 shares have been bought. It is the practice of some traders in a case like this to buy 200 shares at 90 and 100 shares additional at each point of decline. Their reason for buying 200 instead of 100 at 90 is that the market seldom declines as low as they have allowed for and they do not get all the shares of stock that they want to carry. While accumulating stock, the investor should watch the market every day. If he does so he can promptly meet several dangers that are always possible, if not probable. The first of these dangers is that he will not get all the stock he wants by averaging down; the second, that the market will make a much greater decline than expected; and the

[1] See "Facts and Fallacies Regarding Averaging," *Magazine of Wall Street*, March 15, 1924, pp. 881 ff. See also Selden, G. C., *Scientific Methods of Investing and Trading in Stocks*, pp. 55-72.

third, that he will not take his loss but will overtrade by continuing to buy on scale down.

Provision can be made for the last two of these dangers by placing a stop-loss order just below the estimated lowest point. If an unexpected break catches the stop, the investor will be sold out at a minimum loss and can then buy lower down if conditions warrant, but if they do not, his loss is relatively small and his remaining margin is available for further operation. In the accumulation of Southern Pacific above mentioned the investor can protect himself against an unforeseen break by placing a stop at 84¾. No mechanical helps are available to protect against failure to acquire all the stock wanted. The investor must watch for the turn in investment conditions and, when the turn comes, buy the remainder of the stock which he had planned to accumulate.

PYRAMIDS

So much knowledge of the market fluctuations of different stocks and of the technique of trading is required in order to make use of the method of pyramiding in trading that only the experienced trader or investor should ever attempt to pyramid. No one can expect to succeed without a well-built plan of action, without the courage and patience to work the plan, without plenty of capital, without proper protection against loss, without the proper selection of stocks, and without the services of a first-class brokerage house.

The theory of pyramids. There are several types of pyramids. The simplest type begins at the base with a given number of shares of stock. To this base is added a given percentage for each point or two-point increase in price. After the purchase of the shares of stock which make the base no additional funds are contributed by the operator, but the margin required to purchase more stock arises out of the advance in price of stock already held. A more com-

plex type of pyramid requires the operator to contribute additional funds to supply margins for more stock bought. In this case an amount equal to the base amount is bought at each point or two-point advance in price. On this plan less and less money must be supplied by the operator at each purchase until finally a point will be reached where the increase in price furnishes sufficient margin for the amount of stock which is bought at the next step. Advances beyond this point supply more than the additional margin needed.

Let us assume that an operator buys 100 shares of an active stock on a 20-point margin. To maintain this margin he will order his broker to buy an additional 10 shares each two points up, that is, 10% more stock is bought every 20-point margin without deposit of additional funds by the operator.

To illustrate a more complex type of pyramid let us assume that an operator buys 100 shares at the market and

TABLE 18

A SIMPLE TYPE OF PYRAMID

Points Rise in Price	Total Shares Held	Points Margin	Total Profit
0	100	20	.....
2	110	20	$ 200
4	120	20.16	420
6	130	20.46	660
8	140	20.85	920
10	150	21.33	1,200
12	160	21.87	1,500
14	170	22.47	1,820
16	180	23.11	2,160
18	190	23.79	2,520
20	200	24.50	2,900
22	210	25.24	3,300
24	220	26.00	3,720
30	250	28.40	5,100
40	300	32.66	7,800
50	350	37.00	11,000

100 additional shares each two points up. He maintains his margin at 20 points at all times.

These illustrations are, of course, theoretical. The prices of stocks never make such large advances without at least several decided reactions which complicate the structure of the pyramid. There are many other plans according to which the pyramid may be built up.

AVERAGING DOWN OR MARKING DOWN COSTS

The operator can materially reduce his average price by selling part of his long stock on the eve of a reaction, and when the reaction comes he can buy back what was sold.

TABLE 19

A MORE COMPLEX TYPE OF PYRAMID

Points Rise	Total Shares Held	Points of Margin	Operator's Funds Invested	Total Profit
0	100	20	$2,000	$ 0
2	200	20	3,800	200
4	300	20	5,400	600
6	400	20	6,800	1,200
8	500	20	8,000	2,000
10	600	20	9,000	3,000
12	700	20	9,800	4,200
14	800	20	10,400	5,600
16	900	20	10,800	7,200
18	1,000	20	11,000	9,000
20	1,100	20	11,000	11,000
22	1,200	20	10,800	13,200
24	1,300	20	10,400	15,600
26	1,400	20	9,800	18,200
28	1,500	20	9,000	21,000
30	1,600	20	8,000	24,000
32	1,700	20	6,800	27,000
34	1,800	20	5,400	30,600
36	1,900	20	3,800	34,200
38	2,000	20	2,000	38,000
40	2,100	20	000	42,000

The amount of stock that can profitably be sold depends on the size of the reaction. An active stock with relatively wide fluctuations can be expected to react half of its gain when it has advanced 10 to 15 points in a bull market. When 10 shares are bought, each 2 points up a reaction of about 6 to 7 points can be expected if the reaction starts after a rise of 12 to 15 points. That means that at least 30 shares may be sold and bought back again at the bottom of the reaction. If the price of the stock fluctuates more or less regularly, these fluctuations can also be taken advantage of to average down the cost. The danger lies in the fact that the expected reactions may not materialize after stock is sold.

Some traders do not try to break into the structure of the pyramid but adhere strictly to the theoretical scheme which they laid down at the beginning. To obtain the advantage of marking down the price they use a separately held amount of stock with which they trade, buying at the bottom and selling at the top of the short-time fluctuations. What profits are made through this supplementary trading are considered a reduction of the cost of the stock held in the pyramid.

Pyramids may be built on the short side of the market as well as on the long side and in the same way. The illustrations given above of the total shares held, the points margin and the operators' profits are as true when stocks are sold short every 2 points down with a 100-share base as when stocks are bought every 2 points' advance. The only difference is that the column headed "shares held" should be "shares sold short."

STOCKS SUITABLE FOR PYRAMIDING

Stocks that do not move many points are of small advantage to the long-swing trader. Moreover, such stocks must have an active market with small spread between bid and asked prices, and the interval between sales must be in fractions of a point.

The trader for the short-time swings can pyramid as well as the operator for long-time movements. Beginning with 5,000 shares as a base and the purchase or sale of an additional 60 each fourth of a point up or down, as the case may be, will in a 10-point move present a very sizable profit in a short period of time.

The short-swing trader in order to pyramid successfully must have a stock that fluctuates regularly and in a relatively wide area. The market must be especially active and the interval between sales should be in eighths, so that if the trend of the swing changes the trader can close up the transaction immediately without taking much risk as to what the next price quotation will be.

THE USE OF THE STOP-LOSS ORDER TO PROTECT A PYRAMID

Pyramiding is commonly considered a very uncertain process fraught with great danger of large losses. This fear is justified when a great amount of stock is bought on a scale up without proper protection against sudden breaks in the market. When, however, the pyramid is properly protected by a stop-loss order, the danger of relatively large losses is reduced to a minimum.

When using the stop to protect a pyramid against toppling down at the trader's feet, he will follow the same rules that were laid down in the discussion of stop-loss orders, except that there the price of the stock in question was the chief point to consider, while here the average cost of the stocks held in the pyramid is the critical point.

Until the advance in price has gone from 6 to 8 points, the stop must be kept at or below the buying price of the original stock, because at any time a sharp reaction may carry the price down very near a previous low. When the advance is well under way with 10 to 15 points behind it, a reaction of 5 to 7 points may be expected. Before this reaction not much can be done to protect profits, but the stop can be placed at the average cost some time previously,

depending on the width of the usual fluctuations. After the market has been well adjusted or "shaken out," the stop can be placed above the average cost but not so close to the market that the regular fluctuations catch it. When the price of the stock hesitates and is unable to make new highs, the stop should be placed near the market. Nothing should be done mechanically; a careful study of market and industrial conditions is essential. When there are distinct signs that fundamental factors and market conditions indicate a turn in the trend, the pyramid should be liquidated.

Thus, by the use of the stop the operator may protect himself against loss except during the first stages of the advance when he cannot avoid the risk of a decline but, nevertheless, can limit his loss. In all the later stages of the advance a profit can be made reasonably certain.[2]

[2] See *Magazine of Wall Street*, March 29, 1924, pp. 943 ff.; also April 26, 1924, pp. 1115 ff.

XVII

PUTS, CALLS, SPREADS, AND STRADDLES

Call. Put. Spread. Straddle. The cost of privileges; (1) duration of privileges; (2) points from the market. How the number of "points away" is determined. The premium charged. Reasons for buying privileges. Reasons for selling privileges. The use of privileges in trading: (1) to enter the market on the long side; (2) to enter the market on the short side. Low cost of entering the market. Frequent trades under the same privilege. The use of privileges for protection: (1) use of the call when short of stock; (2) use of the put when long of stock.

Privileges or options are of four kinds: the put, the call, the spread, and the straddle. In the business world, options are an every-day occurrence. A business man takes an option on a plot of ground for a given length of time. He is planning an expansion of his business, providing certain contingencies work out in his favor. Expansion makes necessary the ownership of certain plots of ground. In order to insure getting the required land and yet not commit himself to a large expenditure, if present conditions should develop unfavorably, the business executive is willing to pay a relatively small amount to the holder of the land for an option on it for a given length of time. If he does not take the land, he will lose the option price, but it affords him insurance during the period of waiting and investigation.

A coal company may take an option on certain farms pending drilling the territory to find the amount and quality of coal that may be available for mining purposes. If the coal does not prove satisfactory, there is no loss to the company beyond the expense of drilling and the cost of the option. The option is a contract granted by the owner of the land to the buyer of the option giving him the right for a specified sum of money and within certain time limits to take or refuse to take the land at pleasure. No transfer of

the property is necessarily intended. The cost of the option is considered as insurance against loss.

Operators on the stock market use the same process to limit losses and insure gains. The use of the privilege or option is common by members of the London Stock Exchange, where the business of dealing in privileges has been developed to a high degree of perfection. In New York, members of the Stock Exchange are not allowed to trade in privileges on the floor of the Exchange. Article XXIII, Section 8 of the constitution of the New York Stock Exchange reads as follows: "No offer to buy or sell privileges to receive or deliver securities, shall be made publicly at the Exchange, under penalty of a fine of twenty-five dollars for each offense."

Privileges are different from the usual buyers' or sellers' options, running from 4 to 60 days, in that if delivery is not made or called for within the period of the option it must be made on the last day of the life of the option. In the case of privileges, no delivery needs to be made at all.

On the London Stock Exchange and the Continental exchanges privileges have always formed an important part of the business on the floors of the exchanges. In London especially, trading in puts and calls has been reduced to a science.

Although privileges may not be bought and sold on the floor of the New York Stock Exchange yet outside there has for years been a not unimportant business in them. Russell Sage is said to have accumulated no inconsiderable part of his fortune as a dealer in privileges. John W. Gates and James R. Keene were large buyers of privileges.

The business in privileges has rapidly developed in New York during and since the World War. At present between 75 and 100 brokers specialize in privileges. An ordinary day's business of one of the largest put and call houses is said to turn from 25,000 to 50,000 shares, with a total of from 500,000 to 1,000,000 shares annually. Occasionally a house writes a privilege for as much as 50,000 shares for

one customer. The odd-lot trader gets the same advantages as the trader in full lots, since privileges are sold by the best houses on any amount of stock from 10 shares up.

Every put and call sold by a reputable dealer is indorsed by a Stock Exchange house which guarantees that the provisions of the contract shall be fulfilled. The New York Stock Exchange has on occasion sent out a questionnaire to its members inquiring into the activity of each member in issuing or indorsing privileges, with the idea of ascertaining to what extent members are guaranteeing puts and calls, and to what extent the rules of the Exchange may be violated in their connection with the put and call business.

Puts and calls issued by reputable dealers and indorsed by a Stock Exchange house are accepted by other Stock Exchange houses as cash on a margin account.

CALL

A call is a contract, negotiable in form, giving the purchaser or holder the privilege of purchasing from the maker, for a specified length of time, a given number of shares of a certain stock at a price fixed by the contract. The maker of a call contracts to deliver to the holder, at the holder's request, a definite number of shares of a given stock at a fixed price if the request is made within a certain period of time. A call is written as follows:

SHORT FORM

New York, June 15, 192–

For value received, the bearer may call upon me for 100 shares of Famous Players at 105 at any time within thirty days from date. Expires July 15, 192–, at 2:45 p.m.

John Doe

LONGER FORM

New York, June 15, 192–

For value received, the bearer may call on us on one day's notice (except last day when notice is not required) for one hundred (100) shares of the common stock of Westinghouse

Air Brake at one hundred and eight (108), at any time within thirty (30) days from date.

All dividends for which transfer books close during said time, go with the stock. Expires July 15, 192–, at 2:45 p.m.

A. B. C. & Company

Delivery on Clearing-House sheets of the New York Stock Exchange or next day according to Stock Exchange usage.

The longer form simply states explicitly what is implied in the shorter form by custom and usage.

PUT

A put is a contract negotiable in form, giving the purchaser or holder the privilege of delivering to the maker, for a specified length of time, a given number of shares of a certain stock at a price fixed by the contract. The maker of a put contracts to receive from the holder, at his request, a definite number of shares of a given stock at a fixed price if the request is made within a certain period of time. A put is written as follows:

SHORT FORM

New York, June 15, 192–

For value received, the bearer may deliver to me 100 shares of Famous Players at 95, at any time within thirty days from date. Expires July 15, 192–, at 2:00 p.m.

John Doe

LONGER FORM

New York, June 15, 192–

For value received, the bearer may deliver to us on one day's notice (except last day when notice is not required) one hundred (100) shares of the common stock of the New York Central Railroad at one hundred and ten (110) per cent, any time within thirty days (30) days from date.

All dividends for which transfer books close during said time go with the stock. Expires July 15, 192–, at 2:45 p.m.

A. B. C. & Company

Delivery on Clearing-House sheets of the New York Stock Exchange or next day according to Stock Exchange usage.

Here, too, the longer form is simply a statement in full of the customs and usages implied in the short form.

SPREAD

A spread is a type of privilege which combines in one contract both the put and call. A contract for a spread reads as follows:

New York, June 15, 192–

For value received, the bearer may deliver to me one hundred (100) shares of the common stock of the United States Steel Corporation at 114, or call upon me for one hundred (100) shares of the common stock of the United States Steel Corporation at 120, at any time within thirty (30) days from date.

Expires July 15, 192–, at 2:45 p.m.

John Doe

The above contract gives the bearer the right to sell John Doe 100 shares of United States Steel common at $114 per share or to buy 100 shares at $120. A trader who buys this contract is sure to profit, no matter whether the price of Steel goes up or down, provided it goes sufficiently above $120 on the advance or below $114 on the decline to pay for the costs of the privilege, the tax and broker's commission, and to provide a margin of profit. For example, if Steel advances to 123 there will be a profit to the buyer of the privilege or, on the other hand, if it declines to 111 a gain will be registered.

STRADDLE

A straddle is a form of privilege which gives the bearer the right to buy from or to sell to the writer or maker a certain number of shares of a given stock at a specified price within a fixed period of time. A straddle differs from a spread in that the straddle allows both the put and the call to be exercised at the same price, while a spread specifies one price for the call and another for the put, with an appreciable

margin between the two prices. A contract for a straddle reads as follows:

New York, June 15, 192–

For value received, the bearer may deliver to me one hundred (100) shares of the common stock of the United States Steel Corporation at 116 or call upon me for one hundred (100) shares of the common stock of the United States Steel Corporation at 116, at any time within thirty (30) days from date.

Expires July 15, 192–, at 2:45 p.m.

John Doe

With the above contract in his possession, a trader will realize a profit if the price of Steel advances or declines somewhat more than the cost of the contract plus commission and tax.

THE COST OF PRIVILEGES

Put and call prices are regularly quoted on practically all the active stocks on the New York Stock Exchange. A leading house specializing in privileges in New York regularly quotes prices on more than 30 rail, 25 oil, 18 copper, 9 steel, 12 motor, 20 food, 20 dry-goods and mail order, and 25 manufacturing and miscellaneous stocks. A total of over 210 stocks in all classes are quoted. Besides these quotations, special prices are quoted on other stocks on request.

Some of the largest houses dealing in puts and calls quote prices on odd lots as small as ten shares, thus giving the small trader the advantages of the use of puts and calls on nearly the same basis as that enjoyed by the largest operator. For example, one of the best houses quotes options on 100 shares for 30 days at $137.50 and on 10 shares for the same length of time and the same number of points from the market at $15.

1. *Duration of privileges.* The usual length of life of puts and calls varies from a few days to 60 days. Regularly published prices are quoted on 7, 15, and 30 days. These are the most frequent periods, though 60-day options are com-

mon, with an occasional option running 6 months. The most common period is 30 days. Prices vary with the duration of the option. Prices are quoted as follows: 100 shares for 30 days—$137.50; 100 shares for 15 days—$75; 100 shares for 7 days—$50; 50 shares for 30 days—$75; 50 shares for 15 days—$40; 50 shares for 7 days—$25.

2. *Points from the market.* Prices are generally quoted "points away" from the current market price. However, privileges are frequently sold "at the prevailing market price."

If United States Steel common is selling at 115, a call on 100 shares for 30 days can be bought for $137.50 three "points away" from the market. This means that if Steel goes up to 120 and the buyer of the privilege calls for the Steel shares, he will pay 118 per share to the seller, that is, the call gives the holder the right for 30 days to buy from the maker of the contract 100 shares United States Steel at the market price at the time of making the contract, plus $3. Calls on the "points away" basis are always quoted a specified number of points above the market. The purchase of a put on the "points away" basis will give the trader the right to sell to the maker of the contract for 30 days 100 shares of United States Steel at $113 per share. The cost of the put is $137.50 at three "points away." Puts on this basis are always quoted a specified number of points below the market. In order to pay expenses of doing business and make a profit, the dealer or specialist in puts and calls must get a margin above the market price when he sells stock on a call and, on the other hand, when he buys stock on a put must not pay the full market price, but get the stock at a lower figure. Calls then are always quoted "points above" the market and puts, "points below" the market if quoted on the "points away" basis. A call "at the prevailing market price" gives the holder the right to buy from the writer of the call a certain stock for a fixed length of time at the present market price. A call on 100 shares of United States

Steel at the prevailing market price when Steel is selling at 115 gives the holder the right to buy the 100 shares at 115 regardless of what the market price is at the time the stock is called. To be sure, the stock would not be called if the market price declined and remained below 115 for the life of the call. The cost of a call "at the prevailing market price" is, of course, much greater than the cost of a call "points away," and depends on the activity of the stock and its market position. A call on this basis on 100 shares of United States Steel for 30 days might cost perhaps $375.

The put "at the prevailing market price" when Steel is at 115 gives the holder the right to sell Steel to the writer of the put at 115. The put would cost approximately the same as the call, depending on the market position of Steel.

HOW THE NUMBER OF "POINTS AWAY" IS DETERMINED

In the first place, the length of the period of the option makes a difference in the number of points from the market asked. For example, a call on Atchison is quoted by a leading house at 4½ points above the market on a 30-day, 3¼ points on a 15-day, and 2½ points on a 7-day period. A put on Atchison is quoted at 4 points below the market on a 30-day, 3 points below on a 15-day, and 2¼ points below on a 7-day period. Sixty- and 90-day options call for a greater number of points from the market than 30-day options.

The second factor to be considered is the width of fluctuation of the price of the stock. If the price is liable to move up and down sharply more points are asked than if the movement is slow and steady. The quotation sheet of April 22, 1925, of a prominent dealer names 12 points for American Can, 8 for Baldwin Locomotive, 3 for General Motors, and 1½ for Texas Company. High-priced stocks may move many points, though the percentage of change is small. A wide margin must, therefore, be asked by the maker of privileges.

A third factor is the difference in cost of puts and calls.

Puts are usually quoted at a smaller number of points away from the market than calls. For example, on April 22, 1925, when American Can was quoted at 12 points away for calls, the margin on puts was 9 points. Canadian Pacific was quoted at 5 points and 5½ points, for puts and calls, respectively. Texas Company was quoted at 1 point for puts and 1½ point for calls. Going back over quotation sheets covering the last 3 years and selecting at random, the number of points is, with few exceptions, found to be greater for calls than for puts.

The reason for the difference lies in the fact that a dealer in privileges will not sell a call unless he is long of the stock. His broker charges him interest on the long stock during the period of the call. In the case of the put the dealer goes short at selling a put or is willing to take the stock. In neither case is there any interest to be paid.

When a dealer in privileges sells a call on 100 shares of the common stock of Sears, Roebuck and Company for 30 days, he at once orders his broker to buy 100 shares of the stock for his account, paying $175 per share. The interest charge on the 100 shares at 6% for 30 days will amount to $87.50. If he sells a put on 100 shares of Studebaker, he at once orders his broker to sell 100 shares of Studebaker short. The broker charges no interest. The difference of $87.50 is made up in asking a wider margin of points on the call than on the put. When the interest rate is high, other things being equal, the call should command a wider margin over the put than when the rate is low.

A fourth factor is the condition of the market. In a dull, inactive market privileges are cheap, while in an active market the number of points away that will be asked is much greater. When the market in general is active and fluctuating sharply, the dealer must limit the risk he is taking by widening the zone of safety, or his losses would become too frequent and too great.

Again, in an active bull market puts will be quoted cheaper than usual, while calls will be dearer than usual, that is, in a

bull market when prices are consistently advancing a put will seldom be exercised, but calls will be in demand and will be acted upon by the buyer. Puts, therefore, can be sold close to the market, but relatively many points away must be asked for calls. For example, on January 27, 1925, Maxwell Motors class B stock was selling at about 33 and then made a consistent advance for 3 months to 87 on April 15, and by June 16 reached 121⅞. For some time after the rise began, puts were offered for 30 days at $137.50 "at the market," but calls could not be had except at 3 to 5 points above the tape price. A rise of over 50 points in less than 3 months meant that the buyer of a call won out every time. Puts were seldom profitable, and so the dealer in them did not need to take any stock. Moreover, he would have been glad to accept all the stock put to him. In this case the interests back of the movement who sold the puts were ready to take all the stock delivered to them. Of course, the money taken in by the sale of puts at the tape price was so much clear gain.

In an active bear market the reverse of what has just been said of a bull market is true. Now, there will be a tendency for calls to sell closer to the market and puts farther away. In a bear market puts will be in demand and will make a profit to buyers, but calls will seldom be of advantage to them. The more calls dealers can sell, the greater their profits. Hence, they will be offered at a more attractive price, that is, at fewer points from the market.

The law of averages must be noted as a fifth element in determining the points from the market at which a dealer can afford to sell privileges. Insurance depends on the law of averages, and the larger the number of policies which an insurance company holds the more accurately it can predict its risks. The same is true of the dealer in privileges. The more accurately he can predict his risk, the closer to the market he can sell his contracts. A smaller dealer must make larger allowances to cover his less accurately cal-

culable risks and, therefore, must ask more points away from the market.

THE PREMIUM CHARGED

The money paid for an option is usually called the premium after the fashion of the premium paid in insurance. The usual rate at present is $137.50 for a put and $139.50 for a call for 100 shares for 30 days. A tax of $2 must be paid on calls, hence the difference in price. This premium is a fixed figure for all kinds of regularly quoted stocks. The differences in the activity of various stocks are adjusted through the points from the market that are asked. Special premiums are occasionally quoted on particular stocks, either at the regularly required points away or on a smaller range from the tape price. For example, a 7-day call on 50 shares of Sinclair Oil at 1 point up is quoted a premium of $20; when the usual quotation is 1½ points up at a premium of $25. Privileges on groups of stocks are frequently quoted at special rates. For example, for a 7-day call on 20 shares of Northern Pacific pfd., 20 shares of Chesapeake and Ohio, and 20 shares of Southern Pacific, a special rate of $20 is made. If a call on 20 shares of each of the 3 railroads is bought individually, the regular rate is $30.

The usual charge of $137.50 is the result of long experience and more or less careful estimates of the premium required to carry the risk incurred by the writer of privileges. The risks involved in the different characteristics of the many stocks are adjusted to the premium through the points margin from the market demanded.

The premium on a spread is simply the sum of the premiums on a put and a call, that is, $275 plus a tax of $2.

The premiums on calls "at the market" are, of course, greater than those on the "points away" basis. The number of points quoted depends, (1) on the average fluctuations of the price of the stock over the last few months, (2) the effect of any special influences acting on the market now or that

are expected to act on it in the near future, (3) the interest on capital invested and the general expenses of doing business, and (4) the profit desired. The calculation runs as follows:

	Points
The average fluctuation over the past few months modified as to future activity	3
Interest and general expenses, losses, etc	½
Profit	½
Total	4

Accepting this calculation, a call on 100 shares of the stock in question would be sold for $400. Much the largest factor in deciding the premium on privileges "at the market" is thus the activity of the stock.

REASONS FOR BUYING PRIVILEGES

Options are used by purchasers in many ways. The following are the principal uses made of them:

1. *To make a profit on the privilege.* A call on United States Steel is bought at 3 points from the market when Steel is 110. After the contract is made, Steel begins to go up, and at 112½ or 112¾ it is becoming pretty certain that Steel will go to a point that will mean a profit to the holder of the call. The call, therefore, is now worth more than it was at the date of purchase. If 137.50 was paid for it, now it is worth, say, 175, depending on the market situation. The purchaser of the call does not wait on the further advance in Steel but sells his option to some buyer and thus realizes the increase in value of the call.

If a put is bought at 3 points from the market when the market on Steel is 100, and the price declines to 97½ or 97¼, the value of the put increases and can be sold at a profit without waiting on a further decline in the market sufficient to show a profit if Steel were bought and delivered to the writer of the put.

2. *To enter the market.* A trader believes that there will be an advance within the next 30 days in the price of a stock or group of stocks, and instead of the usual custom of buying the stock he buys a call on these stocks. When the stock has made its expected advance, the stock is called and sold on the market at a profit. If, on the other hand, the trader believes there is a drop in the price of certain stocks just ahead, he will buy a put, instead of the usual method of selling short, and after a substantial decline he expects to buy the stock on the market and deliver to the writer of the put.

Traders try to buy calls at or near the bottom of a decline and puts at or near the top of an advance. Thus, calls are in demand when operators expect an advance, and puts are in demand when they expect a decline in the near future.

3. *For insurance.* This is probably the most important use to which privileges are put. Operators in the market protect their trading by buying puts and calls and consider the price paid as well spent money to protect their market position. This point will be explained somewhat in detail later in this chapter.

REASONS FOR SELLING PRIVILEGES

We have just seen why operators in the market buy privileges. But where there are buyers there must be sellers and, therefore, the question arises as to why there are sellers or under what conditions privileges are sold.

1. *Specialists in privileges.* During the World War, trading in options was suspended in London, and it is thought that no small amount of business in privileges was brought to New York. Traders in New York are more and more taking advantage of the attractive features provided them by the put and call, and the development of houses which sell options on a wide range of securities has gone apace. These dealers in options have no particular purpose in sell-

ing options outside of doing a profitable business in them. Their quotations on options are based on the law of averages and a large volume of business. Prices are made on as scientific a basis as possible under the circumstances, and an attempt is made to render a real service to traders.

2. *To buy or to sell stock.* A trader long of stock may think 118 a good price for United States Steel common, and be willing to sell at that price. Steel is now 115 and the trader sells a call at 3 points above the market. This amounts to the same thing as if he had sold one-fifth of his stock at 115 and an additional fifth each point up until all the stock was sold. If the stock goes above 118, it will be called and if it does not, the taker of option money is ahead the premium.

If the trader desires to accumulate Steel after a decline to 100, he can do so by selling a put at 97. By selling the put he accomplishes the same thing as if he had bought on a scale down, taking one-fifth of the stock wanted at each point decline. In fact, he would get his stock after it has declined 3 points and be ahead the premium besides.

3. *Manipulation of stock.* A large operator who wants the market on a stock in which he is interested to advance will offer to sell a put very cheaply. He may have a lot of stock which he wants to sell for one reason or another. When he offers to sell a put very cheaply, it means that he does not expect that any stock will be delivered to him, but that he thinks, on the contrary, that the price will advance. Every large operator is carefully watched and has large influence on the action of smaller traders. They take the clue and buy the stock which he is unloading.

Perhaps the taker of money on a put believes that an advance will actually take place and openly offers to sell puts cheaply to create a following in putting the stock up. A clipping from the *Wall Street Journal* of August 20, 1925, illustrates this point.

Puts on most of the active stocks are in plentiful supply, and because of this, *New Street's* view of the market is bullish, for why should holders be offering puts in great quantities if they thought the market was going down? One firm advertises puts on 5,000 shares of Fisk Rubber, at the market, 60 days, at $137 per 100; 2,000 Atchison, at the market, 60 days, at $300 per 100 shares; and 2,000 New York Central at the same terms. A put on 1,000 Consolidated Gas at the market, 60 days, is offered at $275 per 100; and 2,000 Chrysler, at the market, 60 days, at $600 per 100. Many traders have bought stocks against puts, considering this very good insurance against loss in excess of the cash outlay for the privilege.

The call is used to manipulate on the short side of the market. If a large trader believes the market will decline and has sold short, he can help the decline along by offering to sell calls freely and cheaply. The implication is that he wants to collect premiums on calls but does not want to be called upon to receive stock. Now, he will not be called upon unless the price of the stock in question goes up. The implication is that he expects the market to decline, and since he is a leader, many traders will sell short, thus aiding the decline.

On the other hand, if he is short and thinks it time to cover, he can deceive others into selling stock while he is quietly buying. Their selling will permit him to buy at the lowest price. His selling of calls gives other traders the wrong clue. His action prompts them to think that he, a mighty operator, most probably an "insider," thinks the market will decline further. A man who sells a call is going short of the market at several points above the market. No one sells short unless he expects the price to decline, and, therefore, the proper thing to do is to sell the stock in which he is interested.

4. *As a sort of bonus for successful marketing of stock.* A large corporation desires to float a large issue of stock. The stock is underwritten by a banking house of national or international reputation. As a special inducement to the banking house to create a satisfactory market for the stock,

the house is given a call on a large block of the stock at a figure which will be satisfactory to the corporation and at the same time yield a profit to the banking house if the price of the stock advances sufficiently. When one of the leading banking houses of New York entered into the financing of Marland Oil, it was given an option on 235,000 shares at $40 per share. When the price went above $40, the house called part of the stock, and at $45 more was called.

Again, a large Wall Street operator may be retained by a pool or banking house or corporation to put the stock at interest up. As a special reward or sort of bonus, he is given a call on a large block of stock at a price considerably in advance of the price at the time the operation began. The higher he succeeds in manipulating the stock above the call price, the greater will be his profits.

THE USE OF PRIVILEGES IN TRADING

As has already been pointed out, privileges may be used to enter the market for a relatively short deal or they may be used as an insurance by a trader already in the market either on the long or the short side.

1. *To enter the market on the long side.* The trader believes that the price of a certain stock will advance. He therefore buys a call on the stock at three points above the market. Now, when the price advances the three points, plus enough to equal the premium paid for the call plus broker's commissions and tax, he can call for the stock and sell it on the market at a profit. If the stock does not advance but declines, he is sure that he cannot in any way lose more than the premium paid on the call. Moreover, the decline may be temporary and within the period of the option an advance may carry the price to a good profit. While the stock is declining, the trader need not worry because his loss is limited to a sum fixed and well known at the time the call was bought, and there is always hope that the market will rally.

2. *To enter the market on the short side.* A trader thinks the market in a certain stock is due for a decline, and instead of selling short buys a put. When the price declines, he will buy the stock on the market and deliver it to the taker of his put money. If the put was bought at 3 points below the market price, which was 115, and the price later declined to 100, he will have a profit of $1,200 on each hundred shares less $137.50 and the commissions of his broker.

If, however, the price rises during the entire life of the put, say 30 days, or if the price does not go below 112, he does not exercise his privilege and loses the price paid for the put. If the price advances the first half of the period of the option, the buyer knows he can by no chance or accident lose more than the purchase price of the put. His loss is absolutely limited. After some days the price may decline. If it does decline and gets down to 105 within the 30 days, he will have a profit of $700 less $137.50 and commission.

In the case of the call above, the trader buys the call from a call dealer. When he closes the call, he orders his commission broker to sell the shares represented by the call and to receive the shares from the call dealer. The broker's charge for handling the details of receiving the stock is the same as his regular commission for buying stock. In closing a call, then, there are two commissions and a $4 tax. There was also a tax on the call itself. The same procedure obtains in the case of a put, except that in a put the trader's broker is ordered to buy in the shares on the market and deliver to the dealer in privileges.

When stocks are sold ex-dividend within the life of the call, the purchaser of the call gets the benefit of the dividend when he exercises the call. The purchaser of a put, on the other hand, must make allowance for the dividend if the stock sells ex-dividend during the period of the put when he exercises the put. The seller of the put gets the benefit of the dividend.

LOW COST OF ENTERING THE MARKET

One attractive feature of privileges is the low cost of entering the market. If the trader who is bullish on Steel buys a call, it costs him $137.50 per 100 shares at, say, 3 points from the market. Besides, he is insured against a loss of more than the premium. On the other hand, if he buys 100 shares of Steel, he will want to give at least $2,000 margin money. If the market on Steel is 115, he will also have interest to pay on $9,500. If he places a stop 2 points below the market, he may be stopped out at a loss of $200 and not get back in until the price has again advanced to 115, the original buying price.

Another method of getting into the market with small use of the trader's capital employs an option instead of margin money. A trader buys 100 shares of stock and at the same time also buys a put for the same amount of the same stock "at the market." Any good broker will accept the put if it is guaranteed by a member of the New York Stock Exchange, in lieu of margin money, because if the stock declines in value he can deliver it to the maker of the put at the price paid for it.

The trader may use a put bought on the "points away" basis, but then he must furnish funds equal to the number of points below the market at which the contract is bought. If the put is effective at 5 points below the market, then the trader must furnish $500 on a 100-share contract.

If a trader goes short of the market, a call is bought and delivered to the broker in lieu of margin. The procedure involved is the same as with the put.

By the use of privileges, therefore, a trader can operate in a much larger amount of stock with the same capital than otherwise and always keep his losses at a minimum. The profits, of course, are reduced by the premium paid and the points from the market asked by the taker of option money.

Again, the use of privileges permits small traders to buy and sell stocks in full lots. It also permits diversification by

the small trader that is not otherwise possible. In all cases his risk is limited to a minimum, is certain, and is known before he enters the market.

"At the market" is cheaper than "points away." Some writers on puts and calls make the claim that privileges "at the market" are usually cheaper than on the "points from the market" basis.[1] When a put on United States Steel costs $137.50 and, say, 2 points from the market or $250 "at the market," the latter is the cheaper, for the former amounts to 3.38 points from the market while the latter amounts to only 2.50 points below the market. If the judgment of the trader is right oftener than wrong, and if he makes many trades, the average will work out in favor of privileges "at the market." Traders who do not trade frequently must always remember that if their judgment is at fault, the loss on an option "at the market" will be greater than on an option "points away"; in the case above, $250 as against $137.50.

It is to be noted in this whole section, where an illustration is employed to show the use of a privilege on one side of the market but no illustration is given on the other side, that the same principle applies as well to the other side.

FREQUENT TRADES UNDER THE SAME PRIVILEGE

There is no limit to the number of trades that can be made on the same privilege, except the time limit. This is contrary to the opinion held by many, who think that a privilege holds for but one trade. To illustrate: The price of United States Steel common is 110. A trader believes it is due for an advance and uses the call to enter the market. He buys a call 3 points from the market good for 30 days on 100 shares. After a few days the stock advances to 116. The trader now sells 100 shares short at 116. He is sure that he can get stock to deliver at 113. Following the rally, the reaction carries the stock to 111, where the trader covers

[1] Hesselein, Max, "The Value of the Put and Call," *Finance and Industry*, November 24, 1923.

by buying 100 shares in the market. When the market advances above 113, he again trades against his call by selling short. He can repeat this process until the period of the call ends, when he can exercise his call or let it lapse depending on the market.

A trader can trade against a put in a similar fashion by buying a put 2 points from the market. If the price of Steel is 115 and a put for 100 shares is bought, the trader can go on the market, after a decline below 113, and buy stock and be sure that he can get at least 113 per share by delivering it to the seller of the put. But when the stock goes to 117, he sells it, takes his profit, and still has his put untouched, though he enjoyed its protection against loss on the purchase of stock on the market. He can repeat his plan of trading or can exercise the put when the market gets into the right position again.

Some traders advocate selling 25 shares of stock short at the time of buying a call or, on the other hand, buying 25 shares on the market when a put for 100 shares at, say, 2 points from the market is bought. If, in the case of the call, the market advances as expected, there will be a loss of only $3 per share on 25 shares, and a reasonable profit will be realized on the 75 shares. If it declines, the gain on the short sale will pay the premium of $137.50 and probably show a final profit. In the case of the put, if the market declines as expected, the long stock can be delivered at a 2-point loss and the remaining 75 shares will make up this loss and show a final gain. If the market advances, the long stock is sold on the market at a profit sufficient, it is hoped, to pay the original cost of the put, which is allowed to lapse.

If the privileges are bought "at the market," there will be no loss on the 25 shares if the stock advances in the case of the call, or if it declines in the case of the put, because in the former situation the 25 shares are sold at the market at the time the call is purchased, and since the call is also "at the market" there is no loss, because the stock used to cover

the short sale costs the same amount as was realized on the short transaction. It must be remembered, however, that the price of the privileges "at the market" on, say, United States Steel, would be $250 as against $137.50 "points away" basis.

A spread is a combination of a put and call on a "points away from the current market" basis; a straddle is a combination of put and call on an "at the market" basis. Either the spread or the straddle may be used to enter the market. All the advantages that have been given in favor of the put and the call on the "points away" basis apply equally when the two are used in combination in a spread. All the advantages that accrue to the put and the call bought "at the market" also accrue to the combination of the two in the case of the straddle. Either the put or the call may be exercised, depending on the direction which the market takes. Stock may be bought against the call and sold against the put as outlined above in the discussion of the frequent trades that may be made against the put and the call.

THE USE OF PRIVILEGES FOR PROTECTION

Puts and calls are used not only by those who are about to enter the market for a given stock or group of stocks, but also by those who are in the market on the long or short side as a means of protection.

1. *Use of the call when short of stock.* We have now to take up the methods of employing the call when one is short of stock. Several sets of conditions will be illustrated. A trader has sold short 100 shares of Baldwin Locomotive at 120 expecting it to decline. For two or three days there is little change in the price and the market appears uncertain. To insure himself against loss, the trader buys a call "at the market" for, say, $350. He might buy a call perhaps 6 points above the market for $137.50, but he considers the call "at the market" cheaper because new factors have come into the situation that make an advance quite as probable

as a decline, if not more so. If the price declines to 110, the trader covers at a profit of $1,000 on the short sale. His net profit will be $1,000 less the $350 premium for protection, $2 tax on the call, $50 for commission to his broker, and $4 tax on the sale of the stock.

But if the price had advanced to 126 after he bought the call, he would be sure that he could call the stock needed to cover his short sale at 120, losing only the premium paid for the call, the broker's commissions, tax on the call, and tax on the short sale. Moreover, there is always the possibility that the downward trend will set in before the option expires and carry Baldwin below 120. Suppose the price is 112 on the last day of the life of the call. He will permit the call to lapse and cover his short sale. In a case like the above, only the expert could have handled the stop-loss order well enough to come out of the transaction with a profit.

Next, let us assume that a trader has sold short 100 shares of Baldwin at 120 and the stock has declined to 114, but hesitates at that point, and the situation is not at all certain as to a further decline. To insure his gain the trader now will buy a call "at the market," thus making it certain that he can get the stock at 114 to cover his short sale, whatever may happen. When a rally follows carrying the stock to 117, he does not worry, for he has a profit insured with the possibility that the price will again turn down. For purposes of illustration, we will assume that the price reacts to 108 after the rally to 117 where the trader covers and takes his profit. His net profit is less by the cost of the call, but it was worth all it cost as insurance and as a method of developing a conservative psychology in the trader. Some traders advocate buying a call as soon as one sells short. The reason is that if the market has been misjudged and begins a decline, a call bought later cannot insure against the loss that has already taken place. The call costs the same at the time of going short as later and its protection should be employed at once.

2. *Use of the put when long of stock.* After a trader has bought stock in a certain company, he can protect against loss by buying a put "at the market." Suppose a trader has gone long on 100 shares of Baldwin Locomotive common at 110, but after the purchase the market fluctuates in the same area, moving sidewise instead of upward as was expected. To insure against a decline in the price, the operator will buy a put at the "at the market" and at or near the price paid for the long stock for, say, $350. When the price advances to 120 he will sell his stock, and his net profits will amount to $1,000 less the $350 premium, the $50 commission for selling and buying, $4 tax, and interest on the funds furnished by the broker.

If, however, the price had declined to 106, the trader would have been protected against loss on the stock, for he could at any time deliver it to the maker of the put and receive his purchase price. Moreover, if after the decline the price advanced to 120, the put would be allowed to lapse, but it would have well performed its primary function as an insurance against loss.

Let us next suppose that the trader has bought 100 shares of Baldwin at 110 and it has gone to 118 and there hesitates. The trader will buy a put at 118 "at the market." If the price advances, well and good; if it declines and does not come back, the loss is definite and limited; if it declines and comes back before the end of 30 days, the put has served its purpose, the trader has had peace of mind and a clear brain for other trades, and a profit has accrued.

There is good argument for the purchase of a put at the time of going long on stock. No trader's judgment is infallible, and there is always the contingency of a further decline. Therefore, "buy a put at once and be protected against all loss from the beginning." So runs the argument.

It is evident from what has been said in the foregoing chapter that privileges provide a method of eliminating risk to a greater extent than any other method that has yet been proposed. Privileges are especially valuable because their

use absolutely limits the risk to a definite amount well known at all times. This insurance feature makes them a relatively safe and conservative form of trading. If it is said that profits on individual transactions are not as large as by other methods of trading, it may be replied that, on the other hand, losses are not as great.

Moreover, the use of puts and calls makes possible trading in full lots by the small trader and permits a better diversification of his commitments.

On the whole, it may be said that the merits of privileges are without question and that a much greater development of their use may well be expected and welcomed. The English trader has for many years consistently protected himself by employing puts and calls. The extraordinarily rapid recognition of the possibilities of privileges by American traders in the last five years shows a healthy development along the lines of careful and intelligent investment.

Before closing this chapter, the value of careful, painstaking study must be insisted upon again. There is no mechanical or mathematical scheme that can take the place of a thorough investigation of the company whose stock seems attractive and a careful analysis of the industry concerned and of business in general. The other half of the story is the market itself. An operator who neglects to study the market position of a stock and the market in general misses one of the essential features of the picture.

Methods of limiting loss and protecting gains are valuable tools that aid the investor or trader, but it takes skill and the highest order of intelligence to use them properly under different circumstances. It must be realized that the deeper questions as to the fundamental factors involved in the trends of the market, are much more vital than any scheme, or tool, or piece of machinery. To depend solely on a scheme or tool to carry one to success is assurance of failure. Any one who finds that the use of the stop-loss order, the hedge, the average, and privileges make him less

careful, less painstaking, and less exacting in his study of all the problems involved in buying and selling securities had better give up these tools and devote himself to the more difficult but more profitable work of investing mental energy.

XVIII

THE TECHNICAL POSITION OF THE MARKET

Conditions making a strong technical position. Conditions making a weak technical position. The market fundamentally weak and technically strong. The market fundamentally strong and technically weak. Methods of determining the technical position: (1) information from brokers; (2) estimates of the short interest by financial pages; (3) the floating supply of stocks; (4) the demand and supply of stock for loans; (5) the stock loan rate; (6) brokers' loans; (7) the volume of sales; (8) the price level; (9) tests of the market; (10) the action of the market; (11) current events; (12) trend indicators. Conclusion.

THERE are two groups of conditions that are ever present to affect the market. One group has to do with the market itself, the other group is quite independent of the market. The market as such is made up of bulls and bears, of bull pools and bear pools, of "regular way" delivery, of borrowing and lending of stocks, of bears oversold so that the floating supply of stock is small, or of bulls overbought and a large floating supply of stock overhanging the market. Again, a stock may have been in process of accumulation for some time until large blocks of it are in "strong hands," that is, are owned by wealthy people, or it may have been sold out or distributed to "weak hands," that is, to the public. All these conditions make up the market structure and are distinct from anything like such fundamental conditions as general prosperity, easy money, and an optimistic public or, perhaps, the opposite, general depression, tight money, and a pessimistic public.

At times the fundamental factors like earnings, cash position, general financial conditions, management, and future prospects are all strong, and yet the market is weak or dropping. The causes are not fundamental but are factors in the market technique or machinery. Such are sell-

ing by bear pools, a large supply of stock in the hands of weak holders and unloading by the speculators for the short swings. Again, the fundamental factors may be weak and yet the market structure may be holding up with unexpected strength even against bad current news. The reason is that the market has been oversold, that the supply of stock overhanging the market is small and the bears are covering. Writing on March 30 of the reaction in March, 1925, lasting about four weeks, one of the leading brokerage houses of New York had this to say: "The stock market frequently embarks on movements which have little or no relation to fundamental conditions. Sometimes these movements are of large proportions, aided by the closing out of weak accounts. We would call attention to the fact that the current decline has been of large proportions. . . . We do not believe that current conditions warrant a decline of major proportions. We believe that there is no need to sacrifice good stocks at present levels and that their accumulation will prove more profitable." Later events proved the above statement true in the main. The market had been overbought and many stocks needed a technical correction and then the advance went ahead again. It took a little less than a month to make this correction.

The temporary fluctuations and the minor swings are largely due to the situation as to the market structure or, in other words, the technical position of the market. Current news also has this effect, but very often the current news would indicate a temporary decline when precisely the opposite takes place, showing that the technical position of the market is dominant for the moment. Again, if the technical position is strong, good news may start an advance and carry it farther than it would otherwise go. The same is true of a weak technical market and bad news, except that now the market declines.

To put the situation in brief terms, the movement of the market may be said to be made up of three distinct components: (1) the general trend upward or downward; (2)

movements varying in duration from a week to six or eight weeks superimposed upon the general trend; and (3) fluctuations lasting a few moments or, perhaps, several days. Fundamental conditions control the trend. But the general trend is continually meeting with disturbing conditions which now make it advance more rapidly than the basic situation warrants and now make it decline below the line of trend. These irregularities in the curve of stock prices are in part caused by temporary and unforeseen events, but the greatest causes are the group of conditions known as the technical position of the market.

In the case of the major cycles the periods of accumulation at the bottom and the periods of distribution of stock at the top have characteristics arising out of the market technique and therefore are to be considered under the general topic of the technical position of the market as well as in connection with fundamental conditions and the major cycles.

The tape reader and the trader for the minor swings of the market attempt to judge the technical position of the market. The out-and-out tape reader and minor swing trader claim to care little for fundamental movements. They are operating on the technical rallies and reactions, regardless of the fundamental situation. Traders of this type are liable to sell short at the very moment when fundamental factors support the market, or to go long when the basic situation causes the market to turn down. The successful tape readers and minor cycle traders, however, always keep in mind the basic factors and use them as guide-posts to give general direction to their trading.

We have also the out-and-out major cycle trader or investor who claims to ignore the technical movements of the market. Such traders must always be prepared to carry their holdings through the technical reactions that are sure to come and often amount to sharp and severe breaks. Again, a technically strong market may give the impression that accumulation is going on when the fact is that basic

conditions are weak and the accumulation is nothing but the activity of the minor swing traders. Without a proper reading of the market, the major cycle trader may thus buy stocks a long time before complete liquidation has taken place. Or, on the other hand, he may mistake technical weakness for fundamental weakness, and be misled into not buying when he should buy in a depression or into selling before the proper time to sell at the top of the major cycle.

A leading New York house in its *March Review,* published about March 1, after reviewing the fundamental factors in the market, said: "Furthermore, whoever heard of a bull market coming to an end at a time when the business outlook was excellent, as at present, when brokers' loans were at a comparatively low point, and when money was almost a drug on the market? Conditions like those breed bull markets; they don't stop them."

As late as March 10, 1925, a writer in the *Wall Street Journal* had this to say about the strong financial position of the United States Steel Corporation in support of a continuance of a strong market: "No company in the United States is in a better position to declare a substantial cash or stock dividend than United States Steel. Cash and investment securities total $335,000,000, a figure $65,000,000 in excess of inventory valuation. Cash is equal to nearly one-third of annual gross sales to outsiders. It is evident from this that United States Steel has far more cash than required in its business. If it doubled its present gross it would have more cash than required. Steel may do nothing in the way of a stock or cash dividend this year, but shareholders all know that the board of directors would be warranted in taking action at any time."

But on March 6 the market began a decline which halted only after United States Steel had declined 16; Baldwin 35; Union Pacific 20; and a number of the high-priced specialties as much as 100 points. The fact is that the market had outrun improvements in business and had been

largely overbought. The impending technical reaction was overlooked by the writer of the *Monthly Review*.

In other words, just as the trader on the minor cycles needs to know the major cycle, so the long-swing trader should know the minor cycle arising out of the technical position of the market.

CONDITIONS MAKING A STRONG TECHNICAL POSITION

1. A large short interest in the market will lend to buying sooner or later. After there has been a large amount of short selling in the market, many shorts having sold on a relatively small margin, and having gone the limit of their credit, the market is ready for a rally. The speculators on the bull side of the market see the position of the shorts and make an attempt to drive them to cover by buying stock, which arrests the decline and probably causes an advance. Now a bear is a timid creature, and when the element of uncertainty is injected into the market by a check of the decline and, perhaps, an advance in price, he begins to buy and the rally is under way.

"The shorts in Baldwin Locomotive were intimidated by the American Car & Foundry stock, which was up nearly 10 points from where it was selling a week ago, and within 5 points of the top of the year. President Woodin, while admitting that the equipment industry would continue to be in a period of restricted activity for some time to come, declared that this prospect 'can be faced with equanimity in the certainty that the needs of the country will make imperative in the near future the resumption of equipment buying on a large scale.' This statement had a bearing on the day's operations in Baldwin Locomotive."

As the covering proceeds, the price goes up until finally there is a rush to buy, accompanied by a rapidly rising price. The advance is accelerated by the fact that the bulls hold the stock bought from the shorts for the advance.

Stocks of corporations which have but a relatively small

number of shares outstanding may easily be sold short in volume greater than the amount of stock available for borrowing. Baldwin Locomotive has only 200,000 shares outstanding, of which at times much less than 100,000 shares are available to borrowers. It is relatively easy for the bears operating in this stock to sell much more of the stock than is available for delivery, and, on the other hand, it is relatively easy for the bulls to buy as much as can be delivered to them. The shorts borrow from the longs and deliver to new buyers who in turn lend the same stock again until the bears have sold much more stock than exists. Now is the time for the bulls to call for their stock. The bears are compelled to buy at any cost. The market was oversold relatively to the available stock, and the technical position of the stock was very strong.

Below are given some cases illustrating what has been said as to the effect of a large short interest.

Covering by shorts was responsible for the upturn in the market late this afternoon. There were various rumors in circulation to make more uncomfortable the mental attitude of the bears. Texas Pacific was one of the leaders of low-priced rails, the strength in this issue being based on hopes of a Federal decision by the United States District Court in the Missouri Pacific case.

Without doubt much of the improvement was due to short covering. Urgent buying of American Can, Steel, General Electric, Cast Iron Pipe, and other leading industrials suggested that a large bear following, which had been attracted by the recent decline, was beating a hasty retreat at the first indications that the market had encountered effective support.[1]

Professionals operating on the short side found liquidation was not forthcoming when prices sold off. They were forced to bid for the stocks needed for covering purposes, bringing about a brisk rally at the start of the second hour. It was only a matter of a few minutes until prices had recovered their early losses, and were back again at Friday's closing levels.[2]

Two weeks ago when Baldwin was selling around 110, bear tips on the stock were freely circulated. The stock went up 10 or 11

[1] *Wall Street Journal*, March 21, 1925.

[2] *Ibid.*, April 27, 1925.

points and the shorts were badly hurt. When the stock sold around 120, tips to buy were in general circulation.[3]

2. After a decline showing a profit to the short interest many stop-loss orders are often placed just above the market. When the price advances to these stops they automatically become market orders to buy. When this situation exists in the market, the technical position is strong because the buying due to the execution of the stops will run the price up. This is particularly true if the market is oversold.

The market is honeycombed with short stops as it has been for some days past, and it is noticeable that one stock after another is rushed up, and, of course, these stops become operative. In some issues where there is little stock for sale, small but worried shorts are more or less locked in, and as pressure is brought to bear for delivery their discomfiture is registered in the market.[4]

3. After a period of accumulation, the technical position of the market is strong. The stock has had a well-marked decline followed by a period of uncertainty as to its next movement. The general public has been selling its holdings, which have been quietly bought in by wealthy investors. The stock has been passing from weak to strong hands, and the next move will be upward. Fundamental conditions here operate in conjunction with the technical condition of the market.

An excellent student of the stock market in the autumn of 1921 wrote:

The point we wish to make is that between 65 and 75 a tremendous amount of market activity has occurred in this issue (New York Central) and the length of time during which the price level has been maintained, together with the character of price fluctuations during the period, points quite clearly to a determined effort at accumulation. We consider New York Central one of the most attractive purchases among the high-grade rails.

General Motors forged into new high ground at 84 reflecting

[3] *Ibid.*, June 6, 1925.

[4] *Ibid.*, November 8, 1923.

constructive operations by Du Pont and Morgan interests, based on the expectation of cash payments this year substantially in excess of the regular $6 dividend.[5]

But the most impressive buying seen on the current reaction took advantage of this recession. Durant interests bought Baldwin on a scale down. Despite widespread rumors to the contrary, the so-called Durant group is in good financial shape, and its renewed interest on the buying side was considered a highly significant development.[6]

Baldwin was selling as low as $107.

During the second quarter of 1925, brokers' holdings of United States Steel common decreased from 26.81% to 25.45% of the total issue. Investors accumulated 71,000 shares in addition to their previous holdings. If the large buyers had not expected a very material improvement in earnings in the relatively near future, they would not have bought. But with the improvement in view, the stock was accumulated and firmly held so that there was no large amount of stock overhanging the market. The market was relatively bare of the particular stock, no stock was offered, and buying induced by publicity of high earnings and bright future prospects soon drove the market upward. All the factors conduced to strength. Fundamental and technical factors cooperated.

4. Manipulation of the market of a given stock for a rise in price creates a strong position marketwise in that stock. Bull pools are formed to buy up a large amount of the stock of a corporation and then manipulate the price until it attracts the attention of the public, which then takes the stock off the pool's hands at a rising price. In order to win the confidence of the public the stock must be kept strong.

CONDITIONS MAKING A WEAK TECHNICAL POSITION

1. When the market has been overbought a reaction may be expected at any time in the immediate future. The bulls

[5] *Wall Street Journal*, June 27, 1925.
[6] *Ibid.*, March 28, 1925.

have become too optimistic and have overtraded. Their margins are thin, and their credit is overextended. A large amount of stock is now overhanging the market and any bad news, a call for more margin by the banks, or rumors of the passing of dividends, will cause a rush to sell and get out from under the market.

Not only are the bulls no longer buying nor in a position to buy, but the shorts have covered and are now again ready to sell the market, causing a decline especially with the longs in a vulnerable position. The bears, suspecting an overbought condition, make drives now on this stock, now on that, and hammer the market down. Loans are called and the longs join in supplying stock with no one in a position to buy and support the market.

2. After the price of the shares of stock of a corporation has advanced for some time, many stop-loss orders are usually placed beneath the market either by longs to protect their profits or by current buyers to guard against a sudden break. A supply of stock coming into the market will force a decline. When the decline reaches the stops these will become market orders to sell. Therefore, the market is technically weak when stops beneath the market are about to be caught. Moreover, speculators on the short side, suspecting the presence of such stops, may make a drive against the stock by selling it short, hoping to uncover the stops and, in the decline that follows, buy in stock to cover their short position. This is only one of the ways by which manipulation of the market may become a factor producing a weak technical position.

Below are given some cases illustrating what has been said in the two foregoing sections.

The reasons for the sharp reaction in the railroad shares after the first upward spirt are numerous. One and probably an important reason was the fact that there was no big short account in the railroad shares. In fact, the market, judging from today's action, gave sign of a too large long account.[7]

[7] *New York Evening Post,* August 2, 1920.

Irregularity, with conspicuous weakness in some of the oils, notably California Petroleum, characterized the early part of the stock market session. Professionals, finding an overextended long account in this issue, offered it down and caught stop-loss orders, executions of which carried the price more than 3 points below the opening before support was forthcoming.[8]

Stocks were subjected to heavy selling in Tuesday session. Recessions of one to five points were forced among active issues, and closing prices were mostly at the low levels of the day.

These declines were largely attributable to an overbought situation in the general list. Extensive public participation had been attracted by the recent substantial advances in various sections of the market. When the forward movement was checked by profit taking, and prices began to sell off, the reaction was accelerated by the hasty unloading of speculative lines acquired on the theory that immediate higher prices were in sight.

That the selling movement which occurred was primarily due to conditions within the market was evident from the complete lack of adverse news to which it might be ascribed.[9]

3. After a period of distribution of stocks by the strong holders who accumulated large amounts at much lower prices, the market position becomes weak. When these large interests have about completed selling at a good profit and their stocks have been passed to weak hands and are widely held on margin, they withdraw their support and the price declines. It is to the interest of these investors now to see a large decline in the price of stocks so that they can again accumulate the stock cheaply. At the end of the period of distribution the technical position of the market is weak, due to the overbought condition on the part of the public, on the one hand, and the lack of buying support by the large interests, on the other.

American Hide and Leather preferred was carried from 45 to 142 in less than one year. In 1919 the stock was distributed to the public up to 142, and during the general decline of the market in November and December of 1919 American Hide and Leather preferred broke wide open be-

[8] *Philadelphia Public Ledger,* May 24, 1920.

[9] *Wall Street Journal,* March 11, 1925.

cause the interests which had been sponsoring it removed their support. In 1921 Hide and Leather preferred sold about 100 points below its high of 1919.

In the early part of 1920 Pierce Arrow common was distributed from 75 to 90 and, when support was removed, declined severely until it was selling at about 25.

Stocks like Baldwin Locomotive, United States Steel, Union Pacific, Reading, and many others are periodically under accumulation and distribution, as is shown by their price fluctuations. Baldwin Locomotive was accumulated in 1921 as low as 62¼, advanced to 100, and in the summer of 1922 reacted to 92, where probably more accumulation took place for a rise to 142 in late 1922, and to 144 in early 1923. Distribution took place 80 points higher than the accumulation of 1921, and 50 points above the 1922 price. After the distribution in the latter part of 1922 and early 1923, the reaction carried the stock to 110½ in August, 1923, where it was again accumulated and then distributed up to 131 in February, 1924. In May, 1924, the price was down to 104⅜, where accumulation was again in progress. Distribution took place in early 1925 up to 146. After support was removed, the price rapidly declined to 107 in March, 1925.

Union Pacific had similar periods of accumulation and distribution. Accumulated as low as 111 in 1921, it was distributed up to 154¾ in the latter part of 1922 and early 1923, when the decline carried the price as low as 124½ by August of the same year. Again accumulation was going on to be followed by distribution up to 153¼ in January, 1925, where the decline began carrying the price to 133 in about 5 months.

In all these periods of accumulation and distribution, fundamental factors, no doubt, play the leading rôle, but the technical factors of overbought and oversold conditions must also be very definitely recognized.

4. Large bear pools may, by manipulation of the market,

bring about reactions that carry the price of a stock down many points. With such a pool operating for the decline and the bear element of the public coming in, the market is due for a decline. Its market position is weak.

5. Many short-swing traders are always operating in the leading stocks. The bull contingent buy on reactions and as the stock advances several points begin to sell out and take their profits. The higher the price goes, the greater will be the supply of stocks, for the bulls now unload all their holdings and the bear contingent sell heavily. The pressure of the selling turns the market weak. As the decline makes headway, the sold-out bulls begin to buy, and the bears take their profits by covering. The demand for stocks thus overcomes the supply, and the market turns strong.

THE MARKET FUNDAMENTALLY WEAK AND TECHNICALLY STRONG

When such factors as earnings, the financial conditions, the business outlook, and the management are adverse, when interest rates are high and money tight, and when steel production is dropping, and car loadings falling off, the fundamental factors are weak. On the other hand, there may have been built up in expectation of a decline a large short interest which has oversold the market, so that bulls begin to drive in the shorts, who, in covering, will cause a rally in the price. The fundamental position of the market for the stock is weak, but the technical position is strong.

It is also evident that a market may be fundamentally weak and technically weak at the same time. When the fundamental factors underlying the market are weak and there is an overbought condition, or a large floating supply of stock overhanging the market, or when the market is being manipulated for a decline, both the fundamental and the market situation cooperate in the decline in the market.

Let the curve *m n* represent the price movement of a

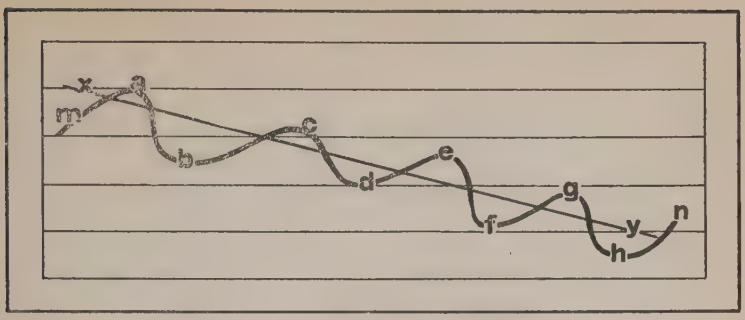


Figure 10: A fundamentally weak market.

given stock and the straight line *x y* represent the trend of a fundamentally weak market position. At points *a, c, e,* and *g* the technical position is strong. In all cases the fundamental position is weak.

THE MARKET FUNDAMENTALLY STRONG AND TECHNICALLY WEAK

When the fundamental factors affecting a stock are in a favorable condition, the general trend of the market will be upward. If, however, the factors that make a weak technical market coexist with the strong basic factors and the former are temporarily more powerful than the latter, a reaction in the market will be expected. The technical position for the time being determines the action of the price of the stock. Again, the price of a stock may be fundamentally strong and also technically strong when the two sets of conditions cooperate. In this case the price will be driven above the trend line just as the price is pressed below the trend line when a weak condition exists marketwise.

In Figure 11 the curve *m n* represents the price movement of a given stock, and the line *x y* represents its trend. Now, at the points *a, c, e,* and *g* the technical position is weak, while at the points *b, d,* and *f* the technical position is strong and in all cases the fundamental situation is strong.

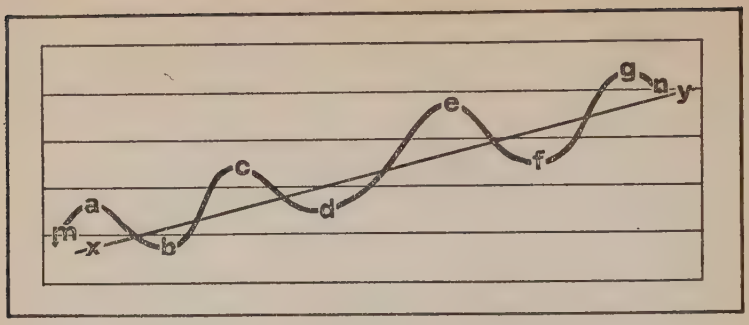


Figure 11: A fundamentally strong market.

METHODS OF DETERMINING THE TECHNICAL POSITION

We have now outlined the factors that make the market technically weak or strong. Since it is impossible to inquire from each trader and investor or even from those doing the majority of the buying and selling what they are doing and expect to do in the market, some other way must be found to ascertain the situation marketwise. There are no absolute criteria, but there are certain facts ascertainable which give some indication of what is going on in the market.

1. *Information from brokers.* When the short interest is large, we saw that the technical position of the market tends to be strong, and when the bulls have overbought, the market is weak. There are various ways of making an estimate of the situation. Brokers' opinions are at times fairly accurate. The business of large houses with extensive western connections will give a fair sample of the total business on the Exchange. A manager of a large brokerage house can thus give a fairly accurate picture of the short account as compared to the long interest. The manager of a western house told the writer that in the latter part of March, 1923, from two-thirds to three-fourths of his business was on the short side of the market. The action of the market proved that his estimate of his own accounts was

representative of the market as a whole. The business of a large New York house would be still more representative on the average.

If the great majority of his accounts are on the long side and on thin margins, the manager knows that the market is being overbought and is getting weaker as this kind of business accumulates. He can give estimates, not only of the market as a whole, but of any particular stock. For example, there might be a large short interest in Baldwin and at the same time a strong long position in General Motors.

Reports as to the buying of large blocks by large inside interests must not be given too much weight. Often these reports are true, but again they are not. The financial pages usually give such items in their reviews of the day's market. Such reports of buying may be true enough, but the same people may be selling through other brokers an equal or greater amount of stock. The reports of buying of Mack Trucks by people of means and inside information during the early part of 1925 were without doubt well founded. The price of the common stock was 148 in February, 185 in June, and later in 1925, 242. The same was true of reports of buying into General Motors.

A broker can always give information as to the difficulty of borrowing a given stock. He either borrows stock to deliver for his short customers, or supplies the stock out of his firm's holdings. If he borrows, he knows the situation; if his firm has a supply of stock and other firms are short, he will soon feel a demand for the loan of stock.

2. *Estimates of the short interest by financial pages.* The best financial pages are usually ready with estimates on the market situation. "Estimates of the short interest run from 500,000 to 2,000,000 shares and it is probably nearer the latter.

"The situation in stock loans at the moment is startling. Some small houses which have loaned few stocks in the past

now report loans of 25,000 to 50,000 shares each. Some of the larger firms which have specialized in loaning stocks report as high as 100,000 shares on loan. As one floor member for a house which has loaned a lot of stock recently said 'The demand in the loan crowd is such that one is pestered from 10 a.m. to 3 p.m. for stock and one's friends are constantly reminding one of the past favors in an effort to get stocks.'.... Conservative opinion is now that the technical position of the market has reached a point where some surprising recovery may occur."[10] One week later the *Wall Street Journal* finds that "the short position in American Woolen, Studebaker, Baldwin, and some of the steel issues is larger than on October 2." Also that the "Borrowing demand for certain issues has increased in some instances by 25%.

3. *The floating supply of stocks.* The amount of stock in brokers' hands constitutes what is regularly known as "the floating supply of stock." This stock has been bought usually on margin by speculators with the expectation of a sale as soon as an advance in prices materializes. If the price does not advance, some traders will switch into some other stock with more promise of a rise, others get tired of inactivity and sell out, others have narrow margins and sell to strengthen their margins. A large floating supply is, thus, a constant menace to the market.

Again, new issue of stock may have been brought out by a syndicate of banks, but the stock is slowly absorbed by investors who buy it and have it transferred into their own names on the books of the corporation of issue. The stock is thus left in the syndicate's strong box. Every means will be used by the syndicate to sell such stock without breaking the market. Rallies in the price will be constantly met with supplies of stock.

Often the financial pages announce that a given large issue of securities was all sold within a half-hour of the

[10] *Wall Street Journal,* October 3, 1923.

opening of the subscription books, but this simply means that the stock has passed from the wholesaler to the retailer or, perhaps, from an extremely large wholesaler to smaller wholesalers who then sell to the retailers. After the stock is thus parceled out it gets into weaker hands and, notwithstanding guaranties as to price, unless actual investors take the securities off the hands of the retailers, there is a potential supply overhanging the market. It sometimes takes some years before an issue is absorbed by investors, taken off the street, and put into their safety deposit boxes.

Again, a large holder of stock may die and the executor or administrator may find that a large block of the stock must be sold to pay inheritance taxes or for some other reason. Such stock will be overhanging the market as a floating supply and gradually liquidated.

Perhaps a large holder of stock has financial difficulties or goes into bankruptcy. The securities must be sold and create a floating supply. Several years ago a large holder of United Fruit found himself financially in trouble and shortly United Fruit dropped 4 points after withstanding several months of attacks by the bears. A block of 60,000 shares of Studebaker is said to have been in the process of liquidation during April, May, and June, 1925, and although the Studebaker Corporation was piling up unprecedented earnings and the industrial averages advanced more than 10 points, Studebaker stock did nothing but hold its own.

An illustration of the changes in the floating supply is found in the published reports of holdings by brokers and investors of United States Steel common. In 1910, brokers' holdings varied from 58.3% to 63.9% of the total number of shares outstanding. December 31, 1916, corresponding figures were 58.05%. June 30, 1924, showed 79.55% in the hands of investors and only 20.45% in the hands of brokers. In these 8 years Steel common had become an investment stock. December 31, 1924, brokers held 1,332,113 shares, or 26.21½, March 31, 1925, 1,364,850 shares or

26.81% and June 30, 1925, 1,293,743 shares or 25.45% of a total of 5,083,025 shares.[11]

As investors buy the stock, they have it transferred to their own names and take it out of the Street until a sizable profit may be made when they sell the stock and it comes back on the Street again. Note that in June, 1924, the floating supply of Steel common amounted to only 20.45%. Steel was selling at a low point and was being accumulated by investors, so that they held 79.55% of the total issue. Beginning to advance after the middle of the summer of 1924 the price of Steel made a steady climb to 129 on January 23, 1925. During this time investors were selling their stock, so that on December 31, 1924, brokers were holding about 6% more stock; that is, the floating supply had increased about 6%, or from 1,039,725 to 1,332,113 shares. By March 31, 1925, investors continued to unload more of their stock, so that 1,368,850 shares were in brokers' names. The price of Steel lost only about 5 points from January 23 to March 16, but was down to 113 on March 30. Distribution by investors was thus going on throughout the winter months, followed by a rapid decline.

Speculators for the decline are happy when the floating supply is increasing but do not like to see investment buying and stocks taken out of the market. Such reports as the following drive the shorts to cover: "According to records of many investment houses and reports from the express companies handling the packages, the shipment of stocks from the New York financial district during the last two weeks has been unusually heavy. A package of securities shipped by a house during the latter part of the week was insured for very close to $1,000,000, most of it represented in stocks."[12]

United States Cast Iron Pipe and Foundry had a sharp rise about February 10, 1925. As to the cause of the rise the *Wall Street Journal* of February 12 has the following to

[11] *Wall Street Journal,* October 16, 1924, April 10, 1925, July 9, 1925.

[12] *Chicago Journal of Commerce,* August 1, 1921.

say: "Recent sharp upswing in United States Cast Iron Pipe and Foundry common is primarily a result of the exceptionally small floating supply. There are only 120,000 shares of Pipe common outstanding, of which W. C. Durant alone is said to hold around 40,000 shares. Other large blocks held by various interests bring the balance available for trading to only a few thousand shares."

4. *The demand and supply of stock for loans.* When the demand for the loan of stocks is insistent there is a large short interest in the market and the technical position is strong. When there is plenty of stock on loan the probability is that the long position is in considerable volume and then the technical position is weak.

Drives against stocks are becoming short-winded. This has caused a number of large traders to shift to the long side of the market. There is good buying of stocks from interior points and some consignments of representative securities are being shipped to out-of-town investors. Demand for stocks in the loan crowd is as large as it has been at any time since the downward movement started, an evidence that there has not been general covering.[13]

Sometimes stocks available for loans are very scarce. Only a few firms are now willing to lend United States Steel common although there has been a heavy borrowing demand in the stock loan market after the close each day. Only one house appeared willing to lend on Wednesday, and Thursday a supply came in substantial amounts from only three houses. A year or more ago, the firms offering to lend United States Steel common could be numbered by the hundred.[14]

Speaking of Maxwell Motor stock a writer in the *Wall Street Journal* of June 3, 1925, says: "Recently the large short interest put the price up sharply and the certificates of deposit moved up in sympathy with the price of the stocks, of which there was little available for covering purposes. Renewed strength today with a record high price revived rumors of a corner in the B stock, members having

[13] *Wall Street Journal,* November 20, 1922.

[14] *The Chicago Journal of Commerce,* August, 1921.

the authority of the Exchange to refuse to accept the certificates as a delivery against stock."

On January 24, 1925, the *Wall Street Journal* reports as follows: "Some brokers report a keen borrowing demand for Baldwin, intimating that they are lending out this stock as fast as they buy it. Estimates in the Street place the short interest in Baldwin as high as 75,000 shares." Again, "American Sumatra preferred's spectacular advance was the outstanding feature of the day. Shorts found the shares available for loaning purposes extremely limited."[15]

5. *The stock loan rate.* It is customary for the lenders of stock to pay a rate of interest approximating the call loan rate, but when the demand by shorts for loans is greater than the supply, the lenders assert their bargaining power against the borrowers, who are competing against each other for the limited supply. The result is that the lenders of stock pay a rate of interest lower than the call loan rate to the borrowers. If there is great demand for stock and a small supply, no interest is paid and the stock is said to loan "flat." If demand is very great compared to the supply, stocks may loan at a "premium," when the borrower pays the lender a bonus to get the loan of stock. From March 12 to March 20, 1925, Baldwin Locomotive was loaning at 1%. Call loan rates varied between 3% and 4%. There was evidently a large short interest in Baldwin. Under ordinary conditions it would have been risky business to sell Baldwin short, but at this time a big general reaction was on carrying the whole market down. On March 19, United States Industrial Alcohol and American Can were lending at 3% with call money at 3%, but Atchison, New York Central, Reading, and Union Pacific at 2½%. On the 20th the call money rate advanced to 3½% and the loan rate on the railroads went to 3%, but Baldwin remained at 1%. By March 24 Baldwin was loaning at 3%, with the call loan rate at 4%. This indicated an easier

[15] *Wall Street Journal,* May 12, 1925.

position on the part of the shorts whose covering had rallied the price in a rapidly declining market by over 3 points.

In Table 20 are listed the loaning rates as given in the *Wall Street Journal* for 79 leading stocks of which 41 were loaning "flat" or at a premium on April 22, 1926. Only 11 stocks in the list of 79 were loaning at a normal rate. Under

TABLE 20

LOANING RATES

Name	Per Cent	Name	Per Cent
Allied-Chem.	Flat	Hudson Mot.	3½
Am. Brake Shoe	Flat	Lehigh Valley	2½
American Can	3½	Jordan Motors	Flat
American Loco.	Flat	Jones Bros. Tea	Flat
Am. Smelting & Refining	3½	Mack Trucks	2½
American Sugar	Flat	Marine pfd	3½
American Tobacco	Flat	Missouri Pacific	2½
American Woolen	Flat	Nash	Flat
Am. Woolen pfd	1-16 prem	Nat'l Cloak & Suit	Flat
Anaconda	3½	Nat'l D Products	Flat
Armour & Co. B	Flat	National Lead	Flat
Atchison	2½	New York Central	2½
Baldwin	2½	New Haven	2½
Baltimore & Ohio	2½	Northern Pacific	2½
Bethlehem Steel	2½	Pan-American Petroleum	2½
Brown Boveri	Flat	Pennsylvania	Flat
Bklyn.-Manh. Transit	2½	Reading	2½
Cast Iron Pipe	2½	Savage Arms	Flat
Chesapeake & Ohio	2½	Sears Roeb.	Flat
Chrysler	3½	Simmons Co.	Flat
Chicago & East. Ill	1-64 prem	Southern Pacific	2½
Chicago, M. & St. Paul	2½	Southern Railway	2½
Chicago Pneu. Tool	½ prem	Standard Oil of Calif.	Flat
Chicago, R. I. & Pac	2½	Studebaker	3½
Coca-Cola	2½	United Drug	Flat
Cont. Can	2½	Union Pacific	2½
Crucible Steel	2	United Cigar	Flat
Cuba Cane Sugar	Flat	United Fruit	Flat
Cuba Cane Sugar pfd	Flat	U. S. Industrial Alcoh	2½
Cushman	¼ prem	U. S. Rubber	3½
Cuyamel Fruit	Flat	U. S. Rubber 1st pfd	Flat
Davison Chem.	3½	U. S. Steel	3½
Delaware & Hudson	Flat	Virginia Carolina	1-128 prem
Devoe & Raynolds A	Flat	Vir. Carolina pfd	1-128 prem
Erie	3½	Ward Baking B	Flat
Famous Players	2¼	Weber	Flat
Foundation Co.	Flat	Western Union	Flat
General Electric	2½	Willys-Over. pfd	Flat
General Motors	2½	Woolworth	Flat
Gimbel Bros.	Flat		

conditions like this, there can be no doubt of the strength of the technical position of the market.

6. *Brokers' loans.* After a continued advance in the price of stocks as represented by the leading averages, the funds loaned to brokers climb to very large figures. Large increases in brokers' loans indicate an overbought market and an overextended credit situation applying not only to traders but also the general public. The size of brokers' loans cannot be used to judge the minor fluctuations but apply to the tops and bottoms of the larger swings. For example, the *Wall Street Journal* estimated that from January 6 to March 17, 1922, brokers' loans amounted from $650,000,000 to $750,000,000. By September 15 the amount had increased by about $1,000,000,000 and stood at $1,950,000,000 on November 13. The reaction in the market had come in October and by December 10, loans were down $125,000,000. February 14, 1923, saw loans at their high of $2,000,000,000. In March the reaction set in which carried the Dow, Jones averages of 20 industrials for a decline of about 20 points and of 20 rails, about 17 points in a few months.

On many occasions in January and February, 1923, it was pointed out that 2 billions in brokers' loans were but a drop in a bucket beside an estimated value of 57 billions in securities listed on the Exchange and, moreover, 2 billions was only 4% of the total resources of the banks of the country, and only 6 2/3% of the total bank loans. But notwithstanding these arguments the market had been overbought and its technical position had to be corrected by the decline which came in due time.[16]

From March 20 to May 20, 1923, the Dow, Jones industrial averages declined from 105.38, the high point, to 92.77, or 12.61 points. From March 3 to May 21, 1922, the rail averages declined 10.50 points. The loans to brokers were high on February 14, about a month ahead of

[16] *Wall Street Journal,* February 19, 1923.

the high of the industrials. From this date to May 28 loans dropped $280,000,000 to $1,720,000,000. Thus, while the averages for the industrials and rails declined from 11% to 12%, the loans declined from 13% to 14%. Brokers' loans kept on declining during the summer of 1923 and were at their low point at $1,330,000,000 on October 29, 1923.

The period from July 1, 1924, to the end of June, 1925, affords a second recent illustration of the movement of brokers' loans as indicators of the overbought or oversold condition of the market. On July 1, 1924, brokers' loans stood at $1,325,000,000, but by the end of the year they had climbed to $1,725,000,000 and on March 6, 1925, had reached their peak at $2,100,000,000.

A writer in the *Wall Street Journal* of March 10, 1925, said: "In view of the activity of the stock market since the early part of November it is remarkable that brokers' loans are not in excess of the $2,100,000,000 estimated. These loans represent not more than 3½% of total value of listings on the New York Stock Exchange. They are equal to less than half of the new security issues sold in this country each year. A fair percentage of these loans is on collateral made up of customers' subscriptions to new security issues. Brokers' loans of $2,100,000,000 today, when one considers the great increase in bond and stock listings, are small compared with loans of $1,500,000,000 to $2,000,000,000 in past years when listings were billions of dollars smaller.

"Today there are no signs of either financial or industrial inflation. Another thing to consider is that margins on customers' accounts are considerably wider than in previous years. These $2,100,000,000 of loans leave no room for pessimism. Based on the $60,000,000,000 to $65,000,000,000 total of listings and the great increase in volume of transactions on the Exchange, they might increase several hundred millions more without exciting the least apprehension. Wall street is simply growing like the banks, industrial companies, railroads, and other lines of commerce and industry."

This writer was voicing the opinion of many people at the time. It was also simply a repetition of what had been said just before the break in March, 1923. The writer was neglecting the overbought situation that had developed after an unprecedented series of two-million share days. A number of the high-priced stocks dropped from 50 to 125 points in the correction of the overbought condition in these stocks during the next 4 to 6 weeks. The average of 20 industrial stocks dropped from 125.68 to 115 and of 20 rails from 100.96 to 92.98, the low in both instances, on March 30. Meanwhile the brokers' loans were down $400,000,000 to $1,700,000,000 on April 3, 1925. On March 31 the averages began a steady climb and by the end of June were up to 131. The loans had by June 22 gained $150,000,000 to $1,850,000,000.

It thus appears that an increase in the loans to brokers sooner or later represents an overbought condition in the market which must be corrected. In Table 21 are given the high and low points in the brokers' loans as estimated by Dow, Jones & Company. In each case the market broke at the high point of the loans, or soon thereafter.

The Federal Reserve Bank of New York is now publishing each week the loans to brokers by member banks in New York City. The first figure published was of January 6, 1926, when loans were at $3,141,000,000 and also the high of the year to July 1. On January 19, 1926, the Governing Committee passed a resolution requiring members of the New York Stock Exchange to report to it all outstanding time and call loans as of the close of business of the last

TABLE 21

HIGH AND LOW POINTS IN BROKERS' LOANS

Low of Loans	Date	High of Loans	Date	Increase
650,000,000	Jan. 6, 1922	2,000,000,000	Feb. 14, 1923	1,250,000,000
1,330,000,000	July 29, 1924	2,100,000,000	Mar. 6, 1925	770,000,000
1,700,000,000	Apr. 3, 1925	2,800,000,000	Nov. 1, 1925	1,100,000,000

day of each month. The figures indicated loans of about 3½ billions in January. The Stock Exchange's figures have been running from 4 to 5 hundred millions higher than those of the Federal Reserve Bank. This is to be expected.

The estimates by Dow, Jones & Company cannot be compared with those of the Federal Reserve Bank or the Exchange. It is probable however that if Dow, Jones & Company had made an estimate for January, 1926, the amount would have been three billions or better. This would indicate an increase in brokers' loans of a billion and a quarter as a conservative figure for the rising market from April, 1925, to January, 1926.

The break in the market came February 11, 1926. It would seem that an increase in brokers' loans in New York of a billion dollars or better may be considered to indicate a market that will need readjustment in the near future.

7. *The volume of sales.* By volume of sales is meant the number of shares sold in a given period of time—a day, a week, a month, or a year.

In attempting to use volume of sales as an indicator of the technical position of the market, it must always be considered in a relative sense. As the number of listed stocks increases, and as New York becomes more of an international market for stocks domestic and foreign, and as the country grows in wealth and the people become educated to buying securities, the volume of sales mounts so that what was once a very large volume becomes later an average or small volume. The same is true of the stock of any single corporation. Volume of sales must be considered from the point of view of (1) the total volume of the whole market compared with preceding total volumes, (2) the volume of the particular stock being studied compared with total volume of the market, and (3) the volume of the stock compared with previous volumes of the same stock.

Again, volume may be considered from the point of view of the tape reader, the minor-swing trader, and the long-

swing or major-cycle operator. We have already noted the use of volume by the tape reader. We shall here take up, first, volume from the point of view of the long-swing trader as indicating the technical position of the market.

Volume is always extraordinarily large in times of distribution, relatively small in periods of accumulation. Going back to the distribution period of 1906, we find six months averaging million-share days, and still earlier, in 1901, volume ran million-share days on the average for five months of which one month mounted to the unprecedented daily average of over 1,800,000 shares. During the distribution period of 1916 the daily average sales mounted to over 1,100,000 shares for five months. Of these five months, one showed a daily average of 1,500,000 shares sold and two, over 1,300,000 shares. In 1919, eight successive months averaged over 1,000,000 shares daily, and, of these, three showed a daily average over 1,400,000 shares. The distribution period of 1922-1923 had six months averaging million-share days.

February and March, 1923, the months of peak prices, ran about 23 and 26 millions of shares respectively. The following July and August totaled about 13 millions each, with September and October somewhat higher. This was followed by distribution in December, 1923, January and February, 1924, when total volume for these months stood at about 24, 27, and 21 millions, respectively.

The 1903-1904 period of accumulation ran month after month with a daily average of sales below 500,000 shares with the last three months before the continued advance began averaging less than 300,000 shares daily. During the latter part of 1907 and the first half of 1908, nine months ran a daily average of 600,000 shares or less. Only four months ran over this amount. The 1917-1918 accumulation period counts eleven months with 600,000 shares or less daily average sales. Again, during the period of accumulation, 1920-1921, the volume for ten months indicated a period of shifting of stocks to strong hands by a daily

average of sales of 600,000 shares or less. The two months just preceding the advance in the market averaged about 400,000 shares daily.

The enormous totals of the first stage of the period of distribution of 1925 have already been mentioned. The figures above given cannot but lead one to conclude that periods of large volume of sales indicate a situation characterized by overbuying, on the one hand, and distribution, on the other. The longer these processes continue, the weaker becomes the technical position of the market. Moreover, the periods of small average daily volume are periods of accumulation. Continuation of these two processes creates a stronger and stronger technical position in the market as time goes on. The inevitable result of weakening the technical position is a reaction, and the result of strengthening the market situation is an advance.

Just at what point the break in an overbought market or the advance in an accumulated market will come is impossible to determine. No one can lay down a rule applying to all cases. It is sometimes claimed that after the market has made a substantial and continuous advance and then begins to weaken with no further price advances, under increased volume, the period of distribution is under way. A study of the distribution periods of 1922-1923 and again 1924-1925 shows that this statement is essentially correct for these two periods, but the difficulty arises when one comes to apply such a rule. In a long sustained advance there will be at least one reaction before the market reaches its high point and the increase in volume with a hesitating rise and, some days later, a decline in prices may be mistaken for final distribution. The technical position must be checked against fundamentals always. Fundamentals may indicate clearly that the advance is not over for some time to come.

8. *The price level.* After a long decline of prices with thorough liquidation of weak long accounts and prices at

low levels relative to the lows of previous periods of depression, the market again looks upward. Accumulation is or will be taking place with stocks going in the strongest hands in the financial world. The oversold condition by the shorts must be corrected by covering. Accumulation and short covering place the market in a technical position that is constructive.

On the other hand, after a long advance in prices many people will have come into the market on small margins and the market will be weak. Thus a relatively large rise in the price level is an indicator of a weak technical position.

9. *Tests of the market.* Suppose a trader wants to know what support is given a certain stock at the current price, or in other words, whether the technical position is strong, indicating operation by pools or large interests for a rise. The trader can test the market by selling one or more blocks of the stock, and if they are snapped up with little or no decline in price the market has a solid basis at least for a short turn. Again, if the market breaks under such selling there is little support at that level. The market is weak. Groups of traders may combine their forces to make such a test. A trader who finds that his short sales are quickly taken at no reduction of price will expect the market to advance, but if the market breaks, he will expect to cover much further down.

10. *The action of the market.* In order to determine the technical position of some particular stock it is necessary to study the stock for the current period. Each period differs from former ones so that what is true of one movement may not be true of another, except in a general way. If the general trend is up, the action of the market will be somewhat different from that of a downward movement for the long swing. Again, a sidewise movement will differ from either an upward or a downward trend. There are certain characteristics that seem to hold for the short swings of 2 to 6 or 8 weeks in any market. For example, during

the latter part of April and the first half of May, 1925, United States Steel common made a sidewise movement with day-to-day fluctuations of about 2 points and then in 5 days jumped from about 114 to 120, a gain of 6 points represented on a graph by an almost vertical line. Now, since there was nothing in the fundamental factors to warrant such action, the conclusion was that the shorts were driven to cover. When the price hesitated around 119 for 2 to 3 days with no further advance, the indications were in favor of a weak technical position. Steel followed this run up with a decline to below 114 in about 10 trading days. This sharp decline following the sharp rally, together with the fact that the previous low was just below 113, and the market again hesitating for a few days with very little, if any, decline, indicated that support had come to Steel and a strong position was again attained.

The action of Baldwin Locomotive common has frequently followed exactly the same lines. After a period of preparation during which the up- and down-swings were relatively small, there was a sudden run up of 10 points followed by a rapid decline. Then, again, a period of preparation followed by a run up of 10 or more points. The point is that a rapid advance following a period of preparation will soon run into a supply of stock which will stop the upward movement, and a reaction will be needed to correct the weak technical position. The same points hold for a rapid decline. It will meet a demand for stock from shorts and longs which will check the fall in price. Each stock has its own width of fluctuations and must be studied individually. Moreover, each stock varies in its fluctuations with the general trend and activity (1) of the market as a whole, and (2) of the group of stocks making up the industry to which it belongs.

11. *Current events.* The effects which current happenings have on the market are often good symptoms of the weakness or strength of the market. For example, the rise

in call money from 3½% to 5% over the July 1 period, the earthquake in California which was at first reported very serious, the threatened coal strike, and the bad news from Europe, each following on the heels of the other, had little or no effect on the market, which kept up its advance begun in April, 1925. Traders interpreted this firmness of the market in the face of repeated bad news as almost certain evidence of the strong technical position of the market.

On the other hand, when such events cause declines or breaks in the market, the market is thin, there is plenty of stock for sale, and the market is in a weak technical position.

12. *Trend indicators.* Several stock-market services claim to be able to predict the technical position of the market, especially with reference to the minor swings. These services have worked out graphic indicators for which they claim a high percentage of correct results. These indicators are claimed to be based entirely on the condition of the market itself, not on rumors, news, earnings, interest rates, or other temporary fundamental factors. The theory is that as the price advances it meets pressure of supply, and as it declines it is supported. The indicators are a measure of the degree of pressure or support in the market and indicate the beginning or the end of minor swings. For example, at the beginning of a bull movement when large amounts of stock have been accumulated and the floating supply is small, a relatively small amount of buying puts the price up quickly. As the price continues to advance, more stock is put on the market, so that a large volume of buying results with only a small rise in the price. Finally, the supply is so great as to overcome the advance and turn it down. More and more buying comes on the market as the price declines, until a large volume is accompanied by but a small decline and ultimately the decline is checked and the advance reinstated. The trend indicators are simply a measure of the factors that make up the resistance points.

What the factors are, specifically, is not revealed by the owners of the services.

CONCLUSION

In conclusion it may be said that there is such a thing as "the technical position of the market." Such words and phrases as accumulation, distribution, an overbought, or an oversold market, floating supply of stocks, a weak market, a sick market, a strong market, a firm market, selling pressure, buying power, good resistance, and so forth, indicate a situation in the market machinery which is different from and due to causes other than purely long-time fundamental and investment factors.

In order to determine the technical position of the market, whether it is strong or weak, a number of clues, indexes, or indicators are available. No one of these is in itself final, and just as a physician combines many symptoms and the results of experiments and tests before he gives his diagnosis, so the investor or trader in judging the position of the market must combine every method, clue, and test that is available. Any one clue or test may be good in so far as it goes, but it may not at all give a comprehensive view and needs to be checked in every way.

Moreover, the technical position of the market should always be studied in connection with fundamental factors in operation. At times technical factors are weak, but fundamental conditions are so strong as to carry the more temporary, technical forces with them in an advance. Again, technical factors are strong, but fundamentals are so weak that the market declines in spite of the strength of the purely market situation.

XIX

RIGHTS AND THEIR MARKET

New York and Philadelphia rights. Conditions of success of an issue of rights. Procedure in issuing rights. Computation of the value of rights. The disposal of rights. The splitting of stock. The parity between the price of rights and stock.

When an investor buys 5,000 shares of the common stock of a corporation with 500,000 shares of common stock outstanding, he acquires (1) one-hundredth part in the control of the company, except when there is a voting trust or some other restriction to control, (2) one-hundredth part of the net earnings available for dividends on the common stock, and (3) one-hundredth part of the net worth of the corporation. To some stockholders the factor of control may not mean much, but to others it is very valuable. As time goes on, the directors of the company are building up the property by plowing in a very generous part of the net earnings instead of paying them out to the stockholders and the equity in the property is increasing in value each year. Fairness to each stockholder demands that his relative share in the control, earnings, and equity shall be maintained. That is what he bought; what he paid his good money for; and what he sacrificed for when he accepted only a small portion of the net earnings as dividends.

As the corporation's business expands, or, perhaps, for other reasons, more funds are necessary. At such times interest rates may be high and bonds cannot be sold to good advantage. Perhaps the company has already all the fixed charges it can reasonably carry; perhaps it is the policy of the company to issue no bonds or notes; it may be the additions or improvements contemplated cannot be expected to pay a fixed charge on their cost for several years. In all

these cases stocks, not bonds, should be sold. But to sell a new issue of stock in the market at the market price may not be possible. An additional supply of the shares would prevent an advance in price and might even break it. Besides, the factors of proportionate control and equity on the part of stockholders would be reduced in each case.

The only just thing to do, then, seems to be to sell the stock to the stockholders. To do this, however, the stock must be sold to them at a reduction sufficient to provide a guaranty against a possible decline in the price and an inducement to buy more shares of this particular stock. And if a stockholder does not desire to buy more stock in his company, he must be given an instrument which he can sell at a price that will recompense him for the value which he will lose on each share on the issue of additional stock. This also means that the new stock must sell at a reduction from the current price.[1]

A corporation, therefore, gives its stockholders, and sometimes its bondholders, the privilege to subscribe to additional stock at a price below the current market price. Such privileges are sometimes called "privileged subscriptions," but more commonly, "rights." In order to preserve proportionate factors in control, equity, and net earnings each stockholder must get his proportionate part of the new issue of stock. Thus, for example, for each four shares of old common stock, the holder will get one share of the new. If the common stock is increased by 20%, then each shareholder will receive a 20% increase in the number of his shares; that is, he will be entitled to one new share for each five old shares in his name.

New stock may be issued, not only for the extension of the business of a corporation, but also to dilute a large surplus. If one share of old stock is represented by $150 assets, and a new share adds only $100 to the assets, then the two shares represent only $125 in assets for each share.

[1] There are a few cases where stockholders were forced to pay more than the market price of the stock.

On the liability side of the balance sheet this means a surplus of $25, where before the new stock was issued there was a surplus of $50 per share. If the same dividend is maintained on both the old and the new stock as was paid on the old stock, there is also a dilution of dividends. A corporation paying $6 issues new stock on the basis of one new share for two old shares and maintains the $6 dividend is really now paying $9 dividends, but it does not appear so on the records nor in the public mind.

Again, a corporation, as has frequently occurred in the past, may capitalize, not its surplus or its present earnings, but its future earning power. New stock will be issued to old stockholders at nominal cost. The business will need the funds and the stockholders are willing to subscribe.

Occasionally a corporation must have funds when the market is not favorable. Bonds may be impracticable for several reasons, and stocks cannot be sold at an acceptable price. The stockholders are now asked to come to the aid of their company. Something must be done, and no one can be expected to help unless the stockholders first of all show their faith in their company.

Burgunder has pointed out that in 1910 there were many instances of sale of stock to stockholders because money was tight, investors wanted larger returns before they put their money into securities, and bonds were cheap and almost impossible to sell to the public. At such times corporations call upon their stockholders for financial aid.[2]

The last four months of 1909 saw the top of a bull market that started almost two years before, and the first half of 1910 registered a decline in the Dow, Jones averages of some 25 points. It may be true that when no one else wants stocks and bonds of overextended companies the stockholders, in order to prevent large losses, can be persuaded to put additional funds into their company.

[2] Burgunder, S. S., "The Declaration and Yield of Stockholders' Rights," *Annals American Academy of Political and Social Science,* May, 1910, Vol. 35, p. 558.

NEW YORK AND PHILADELPHIA RIGHTS

Rights give the stockholder the privilege of buying his quota of stock at a reduced figure. If the stockholder does not want to buy more stock, he can sell his rights on the market.

Rights are considered differently in different markets. In the New York market a right represents the fraction of a new share that attaches to ownership in one old share. If the corporation is increasing its old stock by 20% and a new share is given for every five old ones, then in New York a right represents a privilege to buy one-fifth of a share and it takes five rights to entitle the holder to buy one share of the new stock.

In Philadelphia, on the other hand, a right represents the privilege to buy one share of the new stock. In the case above, it would take five shares to constitute a right, each share representing one-fifth of a right. In other words, when one new share is given for every five shares of old stock, then it takes five New York rights to make one Philadelphia right. If the ratio of new stock to old were one share of the new for every two of the old, then it would take two New York rights to equal one Philadelphia right.

CONDITIONS OF SUCCESS OF AN ISSUE OF RIGHTS

The board of directors and officers of a corporation issuing rights are anxious that the stock shall all be taken up by the stockholders with a minimum amount going on the market. In addition, each stockholder is interested in the success of the new financing, whatever his own plans may be as to the use of his rights. No one wants to buy a right if the total issue is overhanging the market because the conditions of successful financing are wanting. A speculator or investor buying into a company that is about to issue rights should carefully inquire as to those conditions. There are several that must be noted. The stockholders must have

confidence in the management and believe that the additional funds will, at least, proportionately increase net earnings; there must be an adequate price differential between the current price and the issue price, and they should be widely distributed among investors.[3] Unless the stockholders believe that the company has been conservatively managed so that the new capital is not asked for because of extravagance, but is actually needed for reasonable expansion of plant or business and that the net earnings will increase through a series of years as much, if not more relatively, than the capital increase, only a very large discount from the current price could induce additional commitments. Unless stockholders have the fullest confidence in their company, the management will do well to state most fully and frankly exactly why the funds are asked, and how they are to be used.

The stage or phase of the business cycle then current has much to do with the stockholders' confidence in their management. In the spring and summer of 1920 there were few cases of the sale of stock to stockholders. With a reaction and period of depression inevitable, with large inventory on hand and plant already very greatly expanded, it would have taken a shrewd president and board of directors to show that a sizable issue of stock would greatly enhance earning power and stabilize the business. The spring and summer of 1925 saw many corporations distributing rights to their stockholders. Money was easy and confidence in business unshaken during this period.

A second condition demands that the current price be relatively high. Many state laws require that a corporation shall not sell its stock below par. Besides, a corporation does not look favorably upon the sale of its stock below par. Since an adequate discount from the current market price must be given on the new stock, the old stock must sell well above par. There are very few cases where rights have been

[3] See Dewing, Arthur S., *The Financial Policy of Corporations,* Vol. IV. pp. 202-208.

issued granting the stockholder the privilege to purchase new stock at less than par, though such a case is occasional.

A third condition favoring the success of a sale of stock to stockholders through the issue of rights is wide distribution of the stock among investors. When a relatively few large owners hold all the stock of a company, unless the company is unusually successful, it is entirely probable that such large holders will prefer a fairly wide diversification of their holdings of securities and, therefore, will not desire to buy more stock of a company of which they own a large amount already. Their rights will come upon the market. On the other hand, with many holders of small lots, the percentage of those using their own rights will depend largely upon their prosperity. If these smaller holders have been getting a good return regularly, they will put small emphasis on diversification and buy what they know is good, glad of the opportunity the rights afford. It is thus entirely probable that a much smaller percentage of the rights will come upon the market when the stock of a corporation is widely distributed than if there are only a few large holders.

PROCEDURE IN ISSUING RIGHTS

The first stage is the period of rumors that valuable rights will be distributed to stockholders. Leading stockholders may have intimated the possibility. Strength in the market for the stock is taken to confirm the rumors, for it will be said that the insiders are buying the stock with reference to the distribution. Traders and professionals catch the cue and buy. The combined demand effects an unusual advance in the price of the stock.

Meanwhile, on the Curb Market the rights are traded in on a "when, as, and if issued" basis. Contracts are drawn up by which the seller agrees to deliver to the buyer a given number of rights for the stock when and as the rights are issued if they are issued at all. If the rights should not be issued for any reason the contracts lapse, with no responsi-

bility by either party. But if the rights are issued then delivery must be made when they are issued. Thus when the board of directors meets to decide on the issue of additional stock they already have an idea of the estimate which the market places on the value of the rights to subscribe to new stock.

Any stockholder can sell on the Curb the rights which he expects the company to issue, or, on the other hand, he can buy them with the aim of selling them later or of using them to acquire the new shares. In fact, any investor or trader can go long or short in them as his judgment dictates.

After the board of directors has approved a plan for the issue of additional stock, notices are sent to the stockholders advising them of the action of their board. The plan is set forth in detail by letter or printed matter. The reasons for the issue of the new stock, the price at which the new stock may be taken up, the number of shares to be issued, the class of stock eligible for distribution, the ratio of the new stock allotment to the old stock held, the date at which the books will be closed for the purpose of getting the list of stockholders entitled to the privileged subscription, the date of the issue of the warrants conferring the right to subscribe, the date on which rights expire, the dates and method of payment for the new stock, and the date of its issue are all given as early as possible.

If the additional stock proposed in the directors' plan should increase the total stock issued beyond the amount authorized in the corporation's charter, the stockholders must meet to vote to amend the charter, otherwise the directors have full authority to decide on the amount and methods of handling the new financing.

If the stock is listed on the New York Stock Exchange the Committee on Securities announces a date on which the rights may be traded on the floor of the Exchange on a "when issued" basis. On this date the market for the rights is transferred from the Curb Market to the Exchange. From the time the issue of new stock and its sale to stockholders

is announced to the date on which the Committee on Securities decides that the stock shall sell "ex-rights" the old stock sells "rights on." The date of the closing of the corporation's books for getting the list of stockholders of record is usually the date fixed by the Committee on Securities, at which the old stock shall sell "ex-rights." For example, the Independent Oil and Gas Company issued rights to stockholders of record, June 15, 1925, and the stock was sold "ex-rights" on the same day; the Public Service Corporation of New Jersey issued rights to stockholders of record June 5, 1925, and the date appointed by the Committee on Securities on which the old stock should be sold "ex-rights" was June 5. In the case of the Glidden Company, the board of directors announced rights to stockholders of record July 22, 1925. A meeting of the stockholders to approve the plan of the directors was set at August 7. The Committee on Securities therefore decided that the old stock should not sell "ex-rights" on July 22, as is the usual custom, and not until further notice was given by the committee. Until the day on which the old stock sells "ex-rights" the purchaser of the old stock is entitled to the "rights" when issued, that is, the rights are on the old stock and the purchase price of the stock includes the value of the rights. "Ex-dividend" and "ex-rights" are parallel expressions. Before the stock sells "ex-dividend" the price includes the value of the stock and the accrued dividend, that is, the stock sells "dividends on" the same as the old stock of a corporation, issuing rights, sells "rights on" up to the time it is traded in "ex-rights." The term "dividends on" would be too cumbersome for use. The term "flat" is used instead.

The old stock, then, is traded in on the Exchange with "rights on" from the date of the announcement of the issue of "rights" to the day on which the stock sells "ex-rights"; the "rights" are traded in on the Curb Market on a "when, as, and if issued" basis during the rumor stage until the official announcement of their issue and on a "when issued"

basis when the Committee on Securities allows trading in them on the floor of the Exchange.

The next stage of the process consists of the issue of the warrants for the rights to the holders of stock as of the previously announced date, for example, stockholders of record at the close of business July 1. Some companies close their books while the warrants are prepared and others do not, just as in the case of dividend payments. A warrant is a certificate which sets forth in a formal manner the amount of the new stock the given shareholder is entitled to purchase, the subscription price, the terms of payment, and the date of expiration of the privileged subscription. On the back of the certificate are two blanks, one of which is to be filled out and signed if the stockholder wishes to buy new stock, and the other an assignment blank to be used in case the "rights" are sold. If the shareholder desires to use, say, half of his rights and sell the other half, the treasurer of the company or some bank or trust company appointed to handle the issue of warrants will take his warrant properly indorsed and exchange for it two or more warrants, each for the number of rights desired. On the Exchange the Committee on Securities fixes a date some days after the issue of the warrants on which settlement of rights sold on the "when issued" basis shall be made. After this date, all rights sold are settled "regular way."

The final stage of the process is occupied with the purchase and payment of the new stock. At a date fixed by the board of directors the warrants expire. Not later than this date the holders of the warrants must signify to the corporation the number of shares they expect to buy and make payment either in full or the first instalment due. The board of directors usually allows payment to be made in two or more instalments, the dates for each payment having been fixed beforehand. To those making payment in full, interim or temporary certificates are issued. These are listed on the Exchange and traded in from the day appointed by the Committee on Securities. Those buyers who pay in part

only receive "first payment" assignable certificates. These certificates are bought and sold on the market the same as the stock. On the date of the second payment, the "first payment" certificates are sent to the corporation, together with the funds for the second payment, and "second payments" are returned. Suppose there are three payments; then at the final payment the "second payments" are sent in along with the funds for final payment and in return are received the permanent stock certificates. Receipt of the permanent certificates by the stockholder closes the long and complex process of the sale of stock to stockholders.

COMPUTATION OF THE VALUE OF RIGHTS

If the new stock issued on rights were sold to the general public at the market price, the value of the equity of each share of the stock would not decrease, other things remaining the same. Proportionate control, however, would decrease. If the stock were sold to the general public at par when the market is above par, both the value of the equity per share and the proportionate control would diminish. When, therefore, an old stockholder sells his rights to a subscriber, he is giving up real value for which he expects payment. The problem of finding the value of a "right" is somewhat complex and needs careful attention. Since the theoretical value is the base from which the actual value will vary by more or less, it is essential to develop a method of finding the theoretical or base value of a right.

If a corporation whose stock is selling at 110 issues one new share at par for each four old shares, then a stockholder who exercises his rights will find his shares costing an average of 108.

4 shares at 110	440
1 share at 100	100
5 shares cost	540

An investor who buys four rights acquires the privilege

of securing a share of stock worth $108. One right, therefore, is worth $2. The same result is obtained by subtracting 108, the new value per share, from 110, the old value, giving $2 as the difference or the value of the right. Philadelphia rights would be worth $8. The process reduces to the following rule. To find the value of a New York right find the average cost of a share to a stockholder who exercises his rights and subtract from the market price of the old stock.

Various formulas to find the value of a right have been constructed. Several are given below.

$$\frac{P \times R}{1 + R} = \text{the value of a New York right.}$$

P is the difference between the market price and par value. R is the ratio of the new stock to the old. In the case above the formula works out as follows:

$$\frac{(110 - 100) \times \frac{1}{4}}{1 + \frac{1}{4}} = \$2^{4}$$

$$V = \frac{M - S}{R + 1}$$

Here V is the value of a New York right; M the market price of the old stock; S the price of the new stock to old stockholders, and R is the number of shares of old stock which entitles the holder to subscribe for one share of the new stock. The formula applied to the problem above is as follows:

$$\$2 = \frac{110 - 100^{5}}{4 + 1}$$

This formula is especially valuable in the case of the issue of no par stock. Suppose a corporation with no par stock issues one share of new stock for each four shares of old stock, that the old stock is selling at 75, and that the new

[4] Gerstenberg, Charles W., *Financial Organization and Management*, p. 313.

[5] Dewing, A. S., *The Financial Policy of Corporations*, Vol. IV, p. 210.

stock is sold at 65, then the value of a New York right is found as follows:

$$V = \frac{M - S}{R + 1}$$

$$\text{or } \$2 = \frac{75 - 65}{4 + 1}$$

According to the rule given above:

4 shares at 75.....300
1 share at 65..... 65
5 shares.....365

Average cost of 1 share is $73. The market price, $75, less $73, the average cost, equals $2, the value of a right attached to each share of the old stock.

The actual value of rights, as this value is indicated by the price paid on the market, is a changing thing affected by many and complex factors, some fundamental and some due to the market situation. In a rising market where the stock is becoming more desirable the price of rights will be above the theoretical value. The opposite is true of a falling market. Atlantic, Gulf and West Indies Steamship Company rose from a low of 48½ on August 3 to 59⅜ on August 19, 1925, and rights sold at $5. The new stock was issued on a one-to-three basis for the old stock and sold at 40 with the market around 58 for the old issue. The theoretical value then should be about as follows:

3 shares at 58 174
1 share at 40..... 40
4 shares 214
1 share's average cost 53½
58 — 53½ = 4½

On August 20, the high for the stock was 58, and the rights sold high at 5¼ and closed at 5¼, that is, ¾ point above the theoretical value. On August 24, the old stock was selling at about the same price as on the 20th, but the price of the rights was down to 5. Approval by the stockholders

of the recapitalization plan of A. G. W. I. was followed by a drop in the price of rights of ¼ point below the previous close.

Sometimes the efficient operation of a company requires more capital, so that the issue of additional stock will be interpreted favorably, at other times the increase of the number of shares outstanding when sold for value will not conduce to greater efficiency in the use of capital and will be interpreted unfavorably by the market. Again, a large shareholder may not want to add to his holdings and sell all his rights on the market thus depressing the price. Speculation in the rights by the bull crowd or the bear contingent for any reason whatever will pull the price above or press it below the theoretical price.

Public enthusiasm occasionally becomes centered in some one stock or group of stocks and rights issued by a corporation within the field of this interest may sell far above their theoretical value. In August, 1925, one of the public utilities issued rights to buy stock at a price substantially above the market. Such rights theoretically would be worth nothing at all, but actually they sold around $5. The enthusiasm for the public utilities had driven many of them to extremely high prices, so high, indeed, that some of the leading men in the field felt it a duty to warn the public against overspeculation. In a situation like this we have an exception to one of the conditions of success of a sale of stock to stockholders laid down in this chapter; namely, that the new stock must be sold substantially below the market price of the old.

THE DISPOSAL OF RIGHTS

Suppose a stockholder is reasonably sure that his company will issue rights. In what different ways may he dispose of his rights, and which method of disposal will be most profitable? There are several possibilities, each with its advantages and disadvantages.

1. In the first place, before any official announcement of the issue of new stock is made, a stockholder may sell his rights on a "when, as, and if issued" basis. The general impression among traders is that the price will be highest just before the announcement by the directors. This is in accordance with the tradition that when the good news is out, stocks drop. On this notion stocks are frequently sold short by traders. One must hasten to add that there are many exceptions to this supposed rule. The advantage of an immediate sale of rights is the realization of a high price and use of the funds. Moreover, the uncertainty of the market in rights is avoided. The funds realized may be considered something on the order of an extra dividend.

2. A stockholder may wait until the warrants are issued and then sell them. When this is done, it is usually best to sell soon after their issue. It is usually the case that the price is lowest near the date of expiration of the right to subscribe.

One reason for the decline in the price of rights as the date of their expiration arrives is the human tendency to wait until circumstances compel action. The student writes his thesis the last day of the term; the stockholder sells his rights as the final subscription date draws near. A second reason for the decline lies in the anticipation of the issue of a new stock. Although not issued, the new stock during that latter part of the subscription period will be traded in "when and as issued." This addition to the old stock already on the market increases the supply while there is no new factor enhancing the demand. Besides, at this late date stockholders and others expecting to take advantage of the low price to acquire stock will have bought the rights they need, so that speculators for the most part remain to furnish such support to the market as is given it. These men, however, will not buy except at a price low enough to insure a profit later on. Hence, all the conditions of a decline obtain at the end of the subscription period.

Many conditions, however, may arise to overcome the forces of decline, as is shown by a study of the actual prices. Mears found in a study covering 34 railroads with a broad market that, between 1906 and 1912, rights issued by them were at their highest price at the beginning of the period of subscription in 56% of the cases. But he also found that over 29% of the 34 cases of rights were at their high at the end of the period. Rights issued during the same period by 28 industrials with a broad market fared as follows: 39% of the cases were high at the beginning, 36% at the middle, and 25% at the end of the subscription period.[6]

3. A third method of disposal of rights is to sell long stock immediately on the announcement of the issue of rights and to buy rights on the market sufficient to replace the stock sold. The stock must be sold immediately before the effect of the new stock is felt. The best time to buy the rights with which to replace the stock sold is near the close of the subscription period. In this way the stockholder profits by a relatively high price for his stock and a comparatively low price for the rights with which to secure the new stock.

This method is thought by many to be, in the majority of cases, the most profitable way to employ rights. The old stock is sold at a high price, and the rights are bought at their lowest point. The funds realized on the sale of the old stock are available for use and no interest payments on borrowed funds need be made. Besides, the investments of the stockholder are kept intact. There is, however, always the possibility that rights may be selling high near the close of the subscription period and likewise the new stock, as indicated in Mears' study.

4. Instead of selling the entire holdings in a corporation, a stockholder may sell only as many shares as he is entitled to receive by the employment of his rights on the

[6] See a summary of E. G. Mears' data in Dewing, A. S., *The Financial Policy of Corporations,* Vol. IV, p. 212.

stock remaining after the sale. These shares should be sold immediately on the announcement of the issue of new stock. The rights are then exercised at the proper time, and the new stock replaces that sold. The investment position is then the same as before the sale of the old stock, and though a profit has been made on only a limited number of shares, the risk of paying a high price for the rights or the new stock, as is the case above, is avoided.

Only on the date on which the stock sells ex-rights may a stockholder sell as many shares of the old stock as the rights on his total holdings warrant. For example, if one share of the new stock is issued for every four shares of the old, and a stockholder has 1,000 shares, he may sell only 200 shares immediately. For if he sells 250 shares, the number of new shares that he is entitled to, then he will receive rights on only 750 shares, which will enable him to secure only 187.5 shares of the new stock when he needs 250 to maintain his former investment position. After the stock sells ex-rights he may sell 250 shares, because he will receive rights on 1,000 shares.

5. Good authority has favored selling "short" the stock on or immediately preceding the announcement of a new issue. In this case stockholders sell short the same number of shares as they will receive of the new stock. When the rights are issued later on, the new stock is acquired at the issue price and the short sale is covered. This plan usually succeeds. There are, however, disadvantages. The customer must put up margin on his short sale and if the price of the stock goes up he will be subject to margin calls. If many speculators sell short the demand for the loan of stock may make it lend at a premium and there may develop a natural corner in the stock resulting in a high price when delivery of the stock is called for by the lenders.

It is exactly on account of these reasons that this method of the disposal of rights that Mitchell, who has made the most careful study of the subject of stockholders' profits

from rights, disapproves of selling short by the stockholder in view of a new issue of stock.[7] His studies lead him to believe that in the majority of cases the stockholder will realize the greatest profit from selling his entire holdings immediately on the announcement of the new issue and buying on the market near the end of the subscription period rights sufficient to replace his original stock.

6. A stockholder may exercise his rights and secure the new stock to which he is entitled expecting to sell it in the market some time later. In those cases when stock sells highest at the end of the subscription period and for some time thereafter, this method would be the most profitable one. As a general rule, however, the stockholder who expects to sell his new stock would be compelled to hold it for some months before the stock has been assimilated by the market and the price has recovered from the decline caused by the additional supply of stock coming on the market at the time of issue. During this waiting period there will be interest charges to pay; the new stock may lead to a concentration of too large a percentage of the stockholder's investment funds into this one corporation, and then there is also the uncertainty of the price movement of the stock.

Mears' study above referred to shows that in 53% of the 91 cases of rails and industrials studied the stock advanced in price within two months from the termination of the subscription period. It also shows that in 43% of the cases the price of the stocks decreased the next two months following the expiration of the rights to subscribe. Thus, while in the majority of cases the price moved up, yet the element of speculative risk was very great.

7. The stockholder may exercise his rights to increase his long-time investment holdings in the corporation. He believes in the future of his company and utilizes this method

[7] See Mitchell, T. W., "Stockholders' Profits and Privileged Subscriptions," *Quarterly Journal of Economics,* February, 1905, Vol. 19, p. 238.

of increasing his holdings of its shares. No recent studies of the advantages of this plan have been made. T. W. Mitchell in 1905 studied the issue of rights by five leading railroads up to that date. He concludes, first, that a "company which is in a sound financial condition, as are the Illinois Central and the Great Northern, and which pursues a liberal policy towards its stockholders, may greatly add to their annual income through the privileges it offers." In the second place, "the profits from these sources are not adequately reflected in the market price of the stock."[8] These two statements, no doubt, hold at present as they did in 1905. It would be expected that the price would not rise relative to the profits accruing from the privileged subscriptions due to the irregularity and uncertainty of their issue. S. S. Burgunder brought Mitchell's study up to 1910. His findings are not essentially different from the earlier study.[9]

THE SPLITTING OF STOCK

Since the general public is becoming greatly interested in security ownership, it has become worth while to appeal to the man of relatively small means. To hold one share of stock in a corporation stirs the imagination much less than to hold four, five, ten shares, even if the latter are worth but a fourth, fifth, or tenth as much as the one high-priced share. Moreover, many people cannot afford to buy high-priced shares who can buy low-priced shares. When a corporation splits its shares into parts, it thus reaches a lower and much broader level of purchasing power than it had access to before. The increased demand for the stock coming from this new source of purchasing power has the effect of keeping the price of the smaller shares relatively higher and more stable than the price of the stock before the split up.

[8] Mitchell, I. W., *opus cit.*, Vol. 19, p. 257.

[9] Burgunder, S. S., "The Declaration and Yield of Stockholders' Rights," *Annals American Academy of Political and Social Science*, May, 1910. Vol. 35, pp. 560-576.

The study of the exact effect of a stock split on the price of a stock is very difficult. It seems to be a common opinion held by brokers that the effect of splitting a high-priced stock into several parts is bullish. Any definite effect is difficult to determine because the price of the stock so discounts in advance the announcement of the division of shares into parts that when the thing is actually done a reaction may be just as probable as a rally. As long as traders and large investors quite generally hold that a splitting of shares enhances their price and act upon this opinion, the price will almost necessarily advance.

The practice here under discussion has become so general that whenever the price of a stock, already very high, is still advancing, the opinion soon becomes prevalent that insiders, knowing of the intention to divide the shares and believing that this will enhance the value of the stock, are buying it. Another opinion often held is that the way to maintain the value of a high-priced stock is to split it up.

Boards of directors sometimes take advantage of these opinions and inject the element of mystery into the speculative activity in their company's stock by deferring a carefully cultivated rumor that a split is coming in the near future. The stock is thus maintained at an advancing price for some time into the future, while if a split were announced at once the good news would be out and the stock would do well to maintain its proportional price level.

Again, the earnings of a company may warrant a sizable increase in dividends which is usually, though not by any means always, the case when the price of shares is very high. From several points of view, especially that of the good-will of the general public, it would not be good policy very materially to increase the dividend. The way out is to split the shares into two parts and pay each share the former dividend or a large fraction of that amount. The general public does not rebel at a $6 dividend on a no-par share which is but the half of a $100 par share that formerly paid $6. If the dividend on the original shares had

been raised from $6 to $12 and maintained at that figure by some large outstanding corporation, serious questions might have been raised as to the wage and price policies of the management, and as to the justice of a social system that allowed such greed to thrive in high places and control the wealth of a nation.

One of the elements of mystery that is always present in a rumored split of stock is this question of dividends. Will the old dividend be maintained on the new stock? How much will the dividend be increased relatively on the new stock? If the old stock paid $6 per share and each share is split into four new shares, will each new share pay $2, or $2.50, or $3? Here is a good opportunity for no small degree of manipulation and for an interesting struggle between the bulls and bears.

THE PARITY BETWEEN THE PRICE OF RIGHTS AND STOCK

Whenever the price of rights declines appreciably below their mathematical value in terms of stock, there is a margin of profit awaiting the arbitragers. These traders buy the rights at a relatively low price and at the same time sell short the stock of the corporation issuing the rights. After, perhaps, a month the new stock is issued to the holder of the rights, who then delivers it to the lender of the shares on his short sale. The margin between the total cost, consisting of the price paid for the rights, the price paid to the corporation for the new stock, the interest, the commission, and the transfer tax and the selling price of the short stock, is the arbitragers' profit.

Suppose a corporation whose stock was selling at 110 issued rights to subscribe to new stock on a four-to-one basis at par. The stock is now selling "ex-rights" at 108 and the rights at 1¾. The theoretical value of the rights is $2. A floor trader sees an opportunity to make a profit and buys 400 rights at 1¾ and immediately sells short 100 shares of the stock. He will deliver the stock as soon as the new

stock is issued, which may be a month or two later. He has received $10,800 for the stock sold and has bought 400 rights at 1¾, costing $700. The rights give him the privilege to buy 100 shares at $100 per share. He will have a transfer tax to pay and interest on the $700 plus a reserve for possible margin calls by the lender's broker in case the price of the stock should go up. These items can be estimated quite accurately, and the difference between the total cost and the $10,800 received is his profit.

The effect of the buying of rights and the selling of a stock is to raise the price of rights and lower the price of the stock and thus bring the two prices to a parity.

The importance of a continuous market has been stressed again and again in these pages. It is evident that the work of the arbitragers aids in keeping active both the outstanding stock and the rights to subscribe, and reduces the spread between the bid and asked prices so that the variation in price from one sale to the next is smaller than it would otherwise be.

XX

CONVERTIBLE SECURITIES AND THE PRICE OF STOCKS

Reasons for issuing convertibles. The time of conversion. The conversion ratio. Computing the conversion point. Relation of price of bonds and stock. Convertible bonds in 1925.

CORPORATIONS frequently issue bonds, notes, or stocks which allow the holder to convert them into another form of security. A bond may be converted into another bond or into preferred or common stock; first preferred may be converted into second preferred or common stock; one class of common stock into another class. The exercise of the conversion privilege is commonly at the option of the holder of the security except that the conversion of a common stock into a bond is usually at the option of the corporation. If stockholders were allowed this option, they would convert their stock into bonds as soon as they scented financial difficulties ahead and increase the fixed charges, thus increasing the burden of the company and destroying the preferred position of the creditors of the company who bought its bonds or notes.

The conversion of bonds to preferred stocks or bonds and preferred stocks to common stocks may affect radically the price of the stock, the proportionate income, voting power, and equity in the surplus of the corporation of the old stockholders and is of particular interest to them.

Take the case of a company with a capital stock of $5,000,000 and a bonded indebtedness of $1,000,000. The rate on the stock is 8% and the interest on the bond is 6%. Now if the bonds are converted into stock, either the dividend rate must be reduced, or a smaller amount of earnings added

to the surplus at the end of the year. Moreover, since, say, 10,000 shares are added to the 50,000 old shares, a stockholder holding 26,000 shares no longer has the majority voting power. The decrease in the stockholder's equity in the surplus of the corporation depends upon the size of the surplus relative to the amount of stock converted and the price at which the securities are converted.

If a corporation has a capital stock of 50,000 shares amounting to $5,000,000 par value, $1,000,000 surplus, and $200,000 bonds, then the stockholder's equity in the surplus is $20 per share. Now, if the bonds are converted at 100, the capital stock will be increased to 52,000 shares, but the surplus will remain the same. The equity in the surplus per share is now $19.23. If there had been $1,000,000 bonds, the number of shares would have been increased to 60,000 and the equity in the surplus to $1,000,000 divided by 60,000, or $13.33.

In recent years investors have been permitted to share in the prosperity of the company by means of warrants attached to bonds or preferred stock. These warrants give the security holder the right to purchase stock at a given price during a specified period of time. The securities are not convertible, but the attached warrants may be turned into a profit when the stock sells in the market at a figure above the price guaranteed by the warrant. After a given date, warrants may usually be detached from the bond or stock by the investor and sold in the market. Many houses in New York trade in them.

REASONS FOR ISSUING CONVERTIBLES

1. Convertible securities are issued to meet certain elements in the market which desire a high degree of safety of principal and income combined with a potential participation in the future prosperity of the country in general and the corporation in particular. The security back of a mortgage or the preference given debentures and preferred

stocks as to assets and dividends provide the desired degree of certainty of principal and income and the potential participation in large future earnings supplies the speculative element. The outcome of this combination is that a convertible security will sell for more, sometimes much more, than the market would pay for the security without the possibilities and hopes attached. In other words, the market offers a corporation an opportunity to capitalize possible future earnings through the sale of bonds, notes, or preferred stocks.

2. The money market also affords reasons for the issues of convertibles. Stocks are relatively a ready sale when earnings of a given corporation and business generally are high and the future outlook good, but at other times people want bonds if they buy securities at all. At such times a corporation can do nothing else but issue bonds. In order to protect itself against a permanently excessive ratio of bonds to stocks in its capital set-up, the bonds are made convertible into stocks. If interest rates are unusually high, short-time notes convertible into long-time bonds at a later date may be issued, or long-time callable bonds may be sold. Such bonds are callable at the option of the corporation and are often refunded or are paid through the sale of preferred or common stock. This really amounts to conversion of the bonds into stocks.

3. From the point of view of the corporation the reasons for the issue of convertibles may be (1) the desire to maintain control, (2) reduction of interest charges, (3) protection of stockholders against a depression in the price of their stock if a new supply were issued, (4) temporary financial stringency, (5) speculative purposes.

The controlling interests may not be in a position to buy the additional stock needed to maintain their present ratio of voting power if new stock should be issued, and therefore bonds are issued convertible after a certain date. Meanwhile the large stockholders hope to be able to buy, per-

haps at a low price, sufficient stock to give them control when the time of conversion arrives.

Again, new funds may be needed at a time when the market will not take stocks. The convertible feature enables the company later to reduce its fixed charges and increase its credit position by reducing the ratio of bonds to stocks.

Possibly the market for the stock of the corporation and of stock generally is irregular and uncertain, and the issue of a new supply would break the price to the detriment of the stockholders and to the loss of much good-will on the part of the public. There is no better advertisement for a company and its product than a firm market for its stock especially when the rest of the market is hesitating.

It is sometimes intimated that only companies weak financially issue convertible securities. This is far from the fact, for some of our strongest railroads have issued convertibles as well as the weaker industrials, as will be noted from the cases given below. New York Central in March, 1915, issued to stockholders convertible debenture 6s to the amount of 40% of their holdings. These bonds have sold at a premium practically every year since then. The Union Pacific Railroad issued convertible 4s in 1907 due 1927; the Atlantic Coast Line, convertible debenture 4s of 1939; the Atchison, Topeka, and Santa Fe, 4s of 1910 due 1960; Southern Pacific, 20-year convertible 4s due 1929 and 20-year convertible 5s due 1934; Delaware & Hudson, 30-year convertible 5s due 1935; the American Telephone and Telegraph Co., convertible 4s due 1936, 20-year convertible 4½s due 1933, 7-year convertible 6s due 1925; Brooklyn Union Gas, 10-year convertible debenture 7s due 1932; Federal Light and Traction, convertible debenture 7s, Series A, due 1953; Magma Copper, 10-year convertible gold 7s due 1932; Midvale Steel, convertible, sinking-fund 5s due 1936; New York Air Brake, first convertible 6s due 1928; Tennessee Copper, first convertible 6s due 1925; U. S. Smelting Refining and Manufacturing, convertible 6s due 1926; Wilson & Company, 10-year convertible sinking-

fund 6s due 1928 and 10-year convertible sinking-fund 7½s due 1931. The above are some examples of the convertible bonds listed on the New York Stock Exchange.

While some of the strongest corporations have convertible issues, it is also true that convertible issues are often put out by weak companies. The credit position of the corporation in such cases is not strong enough to make an issue of stocks attractive.

Preferred stocks are issued most commonly in the case of the manufacturing industry. Here is found the most fertile field for large earnings, and, therefore, it makes the conversion feature valuable. The common stock of many industrial concerns at the time of organization represents nothing of value. Such assets as the corporation has have been contributed by bond and preferred stockholders. To make the preferred stock attractive the conversion privilege is attached.

Sometimes the convertible privilege is attached to preferred stock in case of a reorganization to repay in part the holders of bonds for losses they were called upon to take in the reorganization. Preferred stocks of railroads with the conversion privilege have frequently originated in a reorganization. For example, in the reorganization of the Missouri Pacific Railway Company the holders of the old First and Refunding 5s and Collateral Trust 4s were given 5% preferred stock convertible at par into common stock.

In times past convertible bonds served well the speculative interests that controlled the Erie Railroad. The great Daniel Drew in the late fifties and early sixties was dominant in Erie and at times manipulated its stock at will. In 1866 he made a loan of three and a half millions of dollars to Erie and received as security 28,000 shares of unissued stock and three millions of convertible bonds. The stock was high and Drew was selling great amounts short. When the bulls who bought the stock thought they had Drew cornered, he converted his bonds, threw the stock on the market, and broke the price from 95 to 50, compelling the

cliques that were scheming to catch him to pocket great losses.[1]

THE TIME OF CONVERSION

The investor or speculator in stocks must know the time at which convertible bonds or preferred stocks may come upon the market. Moreover, if he wants to buy convertibles in order to convert them later at a profit, it is vital to know the beginning and end of the conversion period.

The period during which the conversion privilege is granted to holders of short-term securities as a rule is approximately the life of the security. Sometimes the privilege may not be exercised for the first few years after the date of issue. On the other hand, in the case of long-term bonds the conversion privilege frequently begins some years after issue and expires long before the bond is due. The New York Central convertible debenture 6s due 1935 amounting to $100,000,000 par value were convertible until May 1, 1925, or until 30 days prior to redemption, which might take place at any interest date on three months' notice. The Union Pacific Railroad's convertible 4s due 1927 were convertible until July 1, 1917, but less than two-thirds had been converted at that date. The Atlantic Coast Line Railroad's convertible debenture 4s due 1939 reached the end of their conversion period January 15, 1920. The convertible debenture 6s of the New York, New Haven and Hartford issued 1908 due 1948 may be converted at the option of the holder at any time except when the books are closed after January 15, 1923, to the date of maturity, January 15, 1948.

THE CONVERSION RATIO

The ratio at which one security is convertible into another is known as the conversion ratio. It is usually ex-

[1] See Clews, Henry, *Twenty-eight Years in Wall Street*, pp. 123-124. Also Adams, C. F., Jr., "A Chapter in Erie," *North American Review*, 1869, Vol. 109, p. 30.

pressed in terms of the percentage of the par value of the security which may be converted into the par value of the new security to be received for the old. Thus, if 6% debentures are convertible into common stock at 110, one share par value $100 of the common stock will be given for each $110 of the par value of the bonds converted, or, in other words it takes $110 of the par value of the debentures to secure $100 par value of stock. The Erie Railroad's Series "D" 4s are convertible at 50 into common stock until 1927, which means that until 1927 for every $50 of the par value of bonds converted the holder of the bonds will receive one share of the common stock par value 100.

Most convertible issues are exchangeable par for par, that is, $100 par value of bonds or preferred stocks for $100 par value of common stocks. Many are convertible at a conversion ratio above par. The Delaware and Hudson 4s due 1916 were convertible at 200 from 1907 to 1912; the Union Pacific Railroad's convertible 4s due 1927 into common stock of the company at 175 up to July, 1917; the Barnsdale Corporation's sinking-fund convertible gold 8s due 1931, into class "B" stock (par $25) at $40 of the par value of bonds to one share of the stock; the Punta Allegre Sugar Company's convertible debenture gold 7s, due 1937, into stock at the rate of 10 shares (par $50) for each $1,000 bond.

The convertible feature has meant little for railroad bonds from 1909 to 1921 because the general trend of prices of railroad stocks declined during this entire period. Since that time, however, several large issues have been converted, notably the $100,000,000 debenture 6s of the New York Central Railroad the first four months of 1925. This follows the upward trend which the rails have taken since 1921. The Dow, Jones average for 12 representative rails made a steep advance from around 50 in 1897 to 130 in 1902 and after the crisis and depression of 1903 and 1904, which brought the average down to 90, the advance con-

tinued to around 138 in 1906. In such a period of advance the conversion feature, even though the conversion ratio is relatively high, becomes a valuable factor to the bondholders, and old stockholders may expect that the convertible bonds will sooner or later come upon the market as stocks. The reverse is true in periods of downward price trend when stockholders have little to fear from conversion of bonds.

In the conversion of one security into another frequently the conversion ratio is of such a character that the holder of the security is entitled to a given number of units of the new security plus a fractional unit. Thus, a holder of a $500 bond convertible into stock at 125 will receive 4 shares of stock, but if the conversion ratio were 120, then he would receive 4 1/6 shares. In the first instance, the bondholder would receive a stock certificate for the full four shares, but in the second the manner of adjusting the fractional share differs with different corporations. One corporation will give a certificate for four full shares of stock and a warrant for one-sixth of a share which with other warrants for fractional shares may be presented for a certificate for full shares. Such additional fractional share warrants may be bought and sold in the open market.

Another company will issue a certificate for four shares, in the case above, and pay cash for the remaining sixth of a share, while still another will issue a certificate for five full shares, and ask payment for the remaining five-sixths of a share. The latter method is rare, however.

COMPUTING THE CONVERSION POINT

Suppose a bond now selling at 100 is convertible into common stock at 120, at what price will the stock be at a "conversion equivalent" with the bond, or, in other words, at what price of the stock will the value of the bond and the stock be mathematically equal? Our problem in this sec-

tion is to find a method of getting the answers to the class of questions of which the above is a specific case.

In the first place, bonds and stocks are quoted differently. Bonds sell "and interest," that is, the price quoted does not include the interest accrued, but is the price of the bond as such. On the other hand, stocks are quoted "flat," that is, the price includes the dividend accrued since the last dividend payment. To make the price of stocks comparable with that of bonds, the accumulated dividend must be deducted from the price quoted for stocks. If the 7% dividend on a railroad stock was paid as of July 1, then on September 15 the accrued dividend amounts to 7% on $100 for 76 days taken at the nearest one-eighth of a point. The interest on $100 for 76 days at 7% amounts to 1.46, or 1½ points. If on September 15 the stock is selling at 120, then 120 less 1½, or 118½, is the amount that is comparable with the price of a bond when quoted "and interest." Tables have been prepared which show at a glance the amount to be deducted from the price quotation of a stock to make it comparable with that of a bond.[2]

Now, if, as in the case cited at the beginning of this section, it takes 120 par value of the bond to secure one share (par 100) of the stock, then the share of stock must sell for 120 to be worth 120 par of the bond when each dollar of par value of the bond sells for a dollar in the market. In the market, 120 of the par value of the bond is worth $120, and no one would trade 120 par value of the bond for a share of stock unless he could get at least 120 for it. The theoretical price of the stock at which the bonds may be converted to stock without profit is 120. To this price must be added the accumulated dividend, which in the case above is $1½. That is when the above stock sells at 121½ on September 15 and the bond sells at 100, the conversion equivalent is reached.

Now, to generalize our results, when the price of the

[2] For such a table, see Rollins, Montgomery, *Convertible Securities.* Interest is figured on a 365-day basis.

bond and the conversion ratio are given, multiply the price of the bond by the conversion ratio, and the product plus the accrued dividend on the stock will be the price at which conversion may take place without profit or loss. In other words, multiply the price of the bond by the conversion ratio and add the accumulated dividend. The result will be the lowest price of the stock at which the bonds may be converted.

Let us apply this rule to another case. Suppose in this case a convertible bond is selling at 80, and the conversion ratio is 110. Then, disregarding accrued dividends, the conversion point of the stock will be 80 x 110, or 88.

Next we will suppose the price of the bond is to be found at which it may be converted when the price of the stock is 120, after adjustment for dividends, and the conversion ratio is 120. According to the conversion ratio, 120 of the par value of the bond is required to secure one share (100 par value) of the stock. Now when this 120 of par value of the bond is worth 120 in the market, then the value of the share of stock and the 120 par value of bonds is exactly equal. That is, when 120 par value of the bonds is worth 120, then 100 par value is worth 100 in the market. The conversion point for the bond is, therefore, 100.

Now, to generalize our method, when the price of the stock and the conversion ratio is given to find the conversion price of the bond, subtract the accumulated dividend from the price of the stock and divide by the conversion ratio.

Suppose the price of a stock, after adjustment for dividends, is 120 and the conversion ratio is 110, at what price may the bonds be converted? The theoretical answer is found by dividing 120 by 110.

Some people prefer to state the problem in the form of a proportion. The proportion may be stated as follows: Par value of bond required : par value of stock issued :: price of stock : price of bonds. Substituting the amounts used in the problems above we have the following:

$$110 : 100 :: (x = 88) : 80$$
$$\text{and } 110 : 100 :: 120 : (x = 109.09)$$

The formula may be varied to suit the taste so long as the second and third terms of the proportion both contain the data on stocks and the first and fourth the data on bonds, or so long as the second and third terms contain the data on bonds and the first and fourth the data on stocks. Thus, the par value of bonds required: par value of stocks issued :: price of stocks : price of bonds; or, the price of stocks : the price of bonds :: par value of bonds required : par value of stocks issued.

RELATION OF PRICE OF BONDS AND STOCK

Since a convertible bond partakes of the characteristics of both a bond and a stock, its price, when the quotations on the stock are depressed, depends upon the substantial factors that determine bond values, but when the stock is high in price its value in the market depends on the conversion ratio and the price of the stock into which it is convertible. In other words, when the price of the stock is so low that its advance above the conversion point is a long distance away, the conversion privilege may not mean much, and the bond then stands on its own value as a bond. In a crisis where values break violently, the convertible bond will take its place in the market with other bonds of equal merit. When, however, the stock is advancing and begins to show signs of reaching the conversion price, the convertible bond advances beyond its true value as a bond and overtakes the stock when the conversion point is reached.

To show the effect of the conversion feature on the price of the bonds, the Atchison, Topeka, and Santa Fe convertible 4s of 1955 and of 1960 are well adapted. The 4s of 1955 were issued in 1909, and were convertible from the time of issue until June 1, 1918; the 4s of 1960 were issued in 1910 and were convertible after June 1, 1913, to June 1, 1923. Both bonds are the direct obligation of the company

and though not secured by a mortgage are strong investments. Both are convertible at par. Below are given the high and low prices of the bonds and the common stock of 1910-1925.

In Table 22 it will be noted that the convertible 4s of 1955 followed just below the price of the stock into which they were convertible until 1918, when the conversion privilege expired. After this date they dropped far below the price of the stock. Their price had been many points above the general 4s of 1995, Atchison's premier bond, until 1918, when it took its proper place much below the price of the general 4s. It is here plain that until the conversion feature expired, the convertible 4s of 1955 followed the price of the stock at least at its high points.

The 4s of 1960 were not convertible until June 1, 1913, but were influenced by the price of the stock some years before this date. In 1910 when the general 4s were selling at 101, the 4s of 1960 were high at 104¼, the next year the general 4s lost ground, but the convertibles advanced even

TABLE 22

COMPARISON OF THE HIGH PRICES OF ATCHISON SECURITIES 1910-1925

Security	1910	1911	1912	1913	1914	1915	1916	1917
Common Stock....	124⅛	116⅝	111¾	106⅜	100⅜	111¼	108⅞	107½
4s of 1955.....	122⅞	115⅞	111	105¾	100	110	108½	106½
4s of 1960.....	104¼	105⅝	107¼	103⅝	99⅝	110¼	108⅜	107
Gen. 4s 1995.....	101	99⅞	100	98⅛	96¼	95¾	95⅛	197

Security	1918	1919	1920	1921	1922	1923	1924	1925
Common stock....	99¾	104	90⅜	94	108½	105⅛	120¾	140½
4s of 1955.....	87	77	70½	80	85¾	84⅝	85	85¾
4s of 1960.....	96⅜	102¼	91	93	107¾	104¼	83	84
Gen. 4s 1995.....	90	85½	82¾	86⅝	95¾	91½	91¼	92½

though the stock dropped from 124⅛ to 116⅝ at the high points. The next year the general 4s about held their own; the stock dropped further, but the convertible 4s of 1960 moved up. It is evident here that as the time of convertibility approached, the convertible 4s were approaching the price of the stock and, if adjustment for accumulated dividends is made, approximately reached it. After 1913 the price approximated that of the stock until 1923. From 1913 to 1918 when both the 4s of 1955 and 4s of 1960 were convertible their high prices were approximately the same, but after 1918 the 4s of 1955 sold very materially lower. This difference in price is the market's estimate of the value of the conversion feature. After the conversion privilege of the 4s of 1960 expired in 1923, their price fell back to that of the 4s of 1955.

Both convertible bonds are selling now below the general 4s, as they should according to their merit. That they are no longer influenced by the stock is shown by the fact that the Atchison common stock sold low at 97⅛ and high at 106⅝, in the first nine months of 1924, and low at 116¼ and high at 127⅞ in the first three months of 1925.

Table 23 gives the low prices of three bonds and the common stock of Atchison.

The low points also show the effects of convertibility The 4s of 1960 are below the 4s of 1955, as would be expected until 1913, and then are approximately the same with each other and the price of the stock until 1918, when the convertible feature of the 4s of 1955 expired. From this time on the prices of the 4s of 1955 ran their own course, going much below the prices of the 4s of 1960 and also the general 4s. In 1917 the bonds showed their ability to hold up, even though the price of the stock was depressed.

Holders of convertible bonds need not convert them in order to realize on the advance of the stock, because as the stock advances the demand for the bonds by arbitragers and speculators keeps driving the price to within a fraction

TABLE 23

COMPARISON OF THE LOW PRICES OF ATCHISON SECURITIES

Security	1910	1911	1912	1913	1914	1915	1916	1917
Stock	90¾	97⅞	103¼	90¼	89½	92½	100¼	75
4s of 1955	101	103¾	105	92¼	89½	92⅜	100¾	84
4s of 1960	98	96½	100¼	92	89¾	92⅜	101¾	79
Gen. 4s	97½	97	96¼	91⅞	90¼	89½	92⅛	80½

Security	1918	1919	1920	1921	1922	1923	1924	1925
Stock	81	80½	76	76¼	91¾	94	97⅛	116¼
4s of 1955	71½	65⅛	60	66	76	76	80¾	81⅝
4s of 1960	82	80	77¼	78¾	91¼	77⅞	80¼	81
Gen. 4s	79	75½	69	73⅜	85	84¼	86	88¼

of their conversion equivalent as the stock advances, as the table of highs of the Atchison convertibles shows.

The effect of a large issue of convertibles overhanging the stock market is difficult to judge. Only when the price of the stock is relatively high will conversion take place. This means that the company is prosperous, and the general market is at a high point. Now, if the corporation has large fixed charges, the long-run effect of conversion of part of the fixed charges into a contingent charge will in all probability be good, though temporarily the supply of new stock coming on the market may depress it or, at least, prevent the advance it would otherwise make. It is quite possible that the conversion of the New York Central debenture 6s December, 1924, January and February, 1925 (when some 40 millions were converted) accounts for the fact that the New York Central advanced only 25.8% from its low price of 1924 to its high of the movement ending in March, 1925, while the Pennsylvania gained 35.4%, the Baltimore and Ohio, 61%, the Norfolk and Western, 30%, the Delaware and Hudson, 33%, the Atchison, 32%, and the South-

ern Pacific, 27%. The six roads averaged an advance in the price of their common stock of over 36% against 25.8% by New York Central. If Baltimore and Ohio figures are omitted as unusual, the average for the other five roads is still about 32%. It must be added, however, that the decline from the high to the low in March, 1925, of New York Central was about the same as that of the other roads, although in March some $40,000,000 of debentures were converted.

That the conversion of the debentures of New York Central will strengthen the stock in the long run is most probable, because before the conversion began, the debt of New York Central made up 74.2% of its capitalization against 25.8% of stock. After the sale of $25,000,000 of stock and the conversion of the bonds by May 1, the ratio of debt and stocks to total capitalization stood at about 63.5% and 36.5%, respectively.[3]

CONVERTIBLE BONDS IN 1925

In a rising stock market convertible bonds are popular. The year 1925 is an illustration of this fact. During the year about $269,700,000 of new securities with profit features were issued. Of this amount about $187,700,000 were convertibles and $82,000,000 were issues with warrants attached. This is approximately 7½% of the total of new securities issued in 1925. The effect of the strong stock market in 1925 is evident when one recalls that in 1924 new issues with profit features were a very small percentage of the total new issues of bonds and stocks. Not only were many new convertibles issued in 1925, but old issues fared very well. The Standard Gas & Electric convertible 6½s is one of the outstanding issues with a rise in price amounting to 167, 70 points above the offering price. Other issues did nearly as well.

[3] See *Wall Street Journal*, April 4, 1925.

Among new issues which came out in 1925 the following are outstanding:

CONVERTIBLE BONDS ISSUED IN 1925

American Beet Sugar	$ 3,500,000
Brooklyn Union Gas	11,800,000
Buffalo-Niagara East.	2,000,000
Cities Service Co.	2,500,000
Cuba Company	10,000,000
Dodge Bros.	75,000,000
International Tel. & Tel.	25,000,000
Magnolia Petroleum Co.	15,000,000
National Distillers Prod. Co.	2,500,000
Pan-American. Pet. of Cal.	15,000,000
Warner Bros. Pictures Co.	4,000,000

BONDS WITH WARRANTS ISSUED IN 1925

Associated Gas & Elec. Corp.	$ 2,000,000
Belding-Heminway	5,410,000
Central States Elec. Corp.	10,000,000
Larutan Fuel Co.	2,000,000
Eitington Schild Co.	4,000,000
Gen. Elec. Co. of Germany	10,000,000
North American Cement Co.	6,000,000
Penn.-Ohio Edison Co.	6,000,000
Rand Kardex Bur., Inc.	3,200,000
Reid Ice Cream Corp.	2,000,000
Schulte Real Estate Co.	10,000,000
Southeastern Pr. & Lt. Co.	10,000,000
Trumbull Steel Co.	5,000,000
Walworth Co.	2,500,000

The Rand-Kardex 6s were offered at 99½ and three days later sold at 114½; Southeastern Power & Light debenture 6s offered at 96 are selling at 122. The effect of the stock market on the price of these bonds is evident.

Very few of the type of securities here discussed have mortgage security. They are for the most part debentures and a number are unsecured notes. Discrimination is therefore necessary. Corporations with poor credit are quick to take advantage of the popularity that has lately attached to convertibles. No bond or preferred stock should be bought unless it has real value regardless of the speculative feature.

XXI

THE TRANSFER OF STOCKS

Stock Exchange requirements. Negotiability under the uniform stock transfer act. Negotiability under the common law. Assignment by an individual owner. Assignment by a corporation. Assignment by trustees, executors, and administrators.

Ownership in the stock of a corporation is evidenced by a stock certificate attesting that a given individual or corporation named in the certificate is the owner of a specified number of shares of the capital stock of the company. The books of the company record the names of its stockholders as they have been placed on the certificates. If all the certificates of stock could be brought together, the names of the owners written in the certificates should check, name for name, with those recorded in the stock ledger of the company. The names on the stock ledger are, as far as the company is concerned, those of its proprietors, and to them all dividend checks are sent. They get notices of annual and special meetings; they have voting rights; they get any extra dividends declared by the directors; they get rights to subscribe when new and additional stock is issued; they are called upon to pay assessments in case of reorganization.

Title to ownership is not transferred by the present holder to a new holder, from the point of view of the company, until the old certificate has been canceled and a new certificate has been issued to the new owner in his own name and until the name has been changed on the books of the company.

If a holder of a certificate for 100 shares of stock sells his stock, the buyer will want the stock put in his name on the books of the company and will want a certificate attesting his ownership. The seller properly indorses his certificate and hands it to the buyer, who sends the certificate to the

company or to the company's transfer agent. The agent makes out a new certificate in the name of the new owner, has the proper signatures attached, and sends the new certificate to the new address. The old certificate is canceled and attached to its proper stub in the stock book.

If the owner of the 100-share certificate sells only 50 shares, then he indorses the certificate, signifying that 50 shares are to be transferred to the name of the buyer, and sends the certificate to the transfer agent, who makes out two certificates, one for 50 shares in the old owner's name, and the other for 50 shares in the name of the new owner. After the proper signatures have been attached he sends the two certificates to their respective owners. The old certificate for the 100 shares is canceled and attached to its stub and the books changed to show that the old owner now holds only 50 shares and that a new stockholder has been added to the family of proprietors with an interest in the company amounting to 50 shares of its stock.

The company is very anxious that the name of no one is on its books but a *bona-fide* proprietor and the holder of a stock certificate is anxious that it be genuine. Moreover, if the company issues a certificate to any one not entitled to such certificate, it makes itself liable to an innocent holder. Besides, if it refuses to transfer the stock to a *bona-fide* holder, he may collect damages if the action of the company can be shown to have been the cause of loss to him. In order to safeguard the company and the *bona-fide* owner of stock, numerous restrictions and regulations in the issue of stock and its transfer from one owner to another have been introduced. This chapter aims to discuss some of the practical applications of these requirements as they apply to the transfer of stock.

STOCK EXCHANGE REQUIREMENTS

The authorities of the New York Stock Exchange are interested in the prevention of fraud, counterfeiting, and over-

issue. To this end each corporation on listing its stock must conform to numerous rules laid down by the Exchange.

1. Each corporation must appoint a transfer agent and a registrar located in the Borough of Manhattan. Both the transfer agent and the registrar must be approved by the Committee on Stock List of the Exchange. The reason for requiring that these agencies be located near Wall Street is evident to any one visiting one of the great banks or trust companies in lower New York. After 3 o'clock, long lines of messengers may be seen leading to the transfer windows. On arrival at the window the messenger deposits his bundle of stock certificates and receives a receipt. The next day at 1 o'clock, or thereafter, the new certificates will be ready for distribution to holders of the transfer agent's receipts. The immense number of transfers can be handled at smaller cost and with much greater dispatch and with fewer errors when the work is all centralized in one great institution near the market place. It is usual, therefore, for a corporation to employ a large bank or trust company in the Wall Street district to act as transfer agent, and another bank or trust company to serve as registrar. The work of the registrar consists of keeping a complete record of all ownership of stock, of checking all new certificates against old certificates to see that no stock is issued except to rightful owners, that old certificates have been promptly canceled, and that there is no overissue of shares above those properly outstanding. Every registrar is under obligation to the Exchange because of papers which he must file with its secretary agreeing to comply with all the Exchange's rules and regulations as to the duties of a registrar.

The registrar's certification must appear on each certificate before the certificate can be sent out to its owner. This certification is his assurance that there has been no fraud, overissue, or counterfeiting.

The institution or individual acting as transfer agent may not also act as registrar for the same company. A company

may not act as its own registrar, and if it transfers its stock at its own office, then "the transfer agent or transfer clerk shall be appointed by specific authority of the board of directors to countersign certificates, in said capacity, and shall be other than an officer who is authorized to sign certificates of stock."[1]

2. In order that the safeguards required by the New York Stock Exchange may not be nullified by the transfer of stock in other cities, the regulations of the Committee on Stock List provide that "the entire amount of the capital stock of a corporation listed upon the Stock Exchange must be directly transferable at the transfer office of the corporation in the Borough of Manhattan, City of New York. When a corporation makes a transfer of its shares in other cities, certificates shall be interchangeably transferable, and identical in color and form, except as to names of transfer agent and registrar; and the combined amounts of stocks registered in all cities shall not exceed the amount authorized to be listed."[2]

3. The Exchange requires the blank form of assignment and power of attorney on the back of the certificate or on an attached form to read as shown at the top of page 403.

The transfer of title is, according to this assignment, without condition, and the power of attorney cannot be recalled once it is given. The note calls attention to the fact that the Exchange requires that the signature of the holder as signed to the assignment blank must conform in every particular to that written in the face of the stock certificate.

NEGOTIABILITY UNDER THE UNIFORM STOCK TRANSFER ACT

Under the common law, stock certificates are not negotiable. The courts have held that since stock certificates do not conform to the requirements of negotiability, they must

[1] The Committee on Stock List of the New York Stock Exchange, *Requirements for Original Listing*, July 1, 1924, p. 6.

[2] *Ibid.*

For value received.....hereby sell, assign, and transfer unto .....

.....

.....shares of the *capital stock represented by the within certificate and do hereby irrevocably constitute and appoint.....

..... attorney to transfer the said stock on the books of the within named company with full power of substitution in the premises.

Dated..... 19.....

.....

In presence of

.....

* On certificates without nominal or par value the word "capital" may be omitted.

NOTICE: The signature to this assignment must correspond with the name as written upon the face of the certificate in every particular without alteration or enlargement, or any change whatever.

be declared non-negotiable. Dos Passos, writing in this connection, says, "The courts have everywhere with marked unanimity placed them in the category of non-negotiable instruments."[3]

In order to correct the disadvantages of the non-negotiability of stock certificates and to make uniform the requirements of assignment in the many different states, a uniform stock transfer act has been advocated by the people interested in simplified practice and uniform standards in transfer requirements. A number of states have passed this act. Prominent among these states are New York, Pennsylvania, Illinois, Ohio, Massachusetts, Connecticut, New Jersey, Rhode Island, Maryland, Wisconsin, Louisiana, and Tennessee. The certificate of stock, though not negotiable at common law, has been made negotiable by those states which have passed the Uniform Stock Transfer Act or some modification thereof.[4]

It must be added that under the constitution contracts existing before the enactment of the Uniform Stock Transfer

[3] Dos Passos, J. R., *Treatise on the Law of Stockbrokers and Stock Exchanges*, Vol. I, p. 700.

[4] Campbell, Douglas, *The Law of Stockbrokers*, 1922, p. 83.

Act cannot be changed by it and, therefore, all certificates of stock issued by any corporation in any state before the enactment of the law are under the common law non-negotiable. Only stocks that have been issued since the enactment are negotiable. For example, the law was passed by the state of New York in 1913. In New York, therefore, only stock issues put out since that date are negotiable.

Among other things the act, as effective in the State of New York, provides as follows:

Sec. 162. *How title to certificates and shares may be transferred.* Title to a certificate and to shares represented thereby can be transferred only: (*a*) By delivery of the certificate endorsed either in blank or to a specified person by the person appearing by the certificate to be the owner of the shares represented thereby, or (*b*) By delivery of the certificate and a separate document containing a written assignment of the certificate or a power of attorney to sell, assign or transfer the same or the shares represented thereby, signed by the person appearing by the certificate to be the owner of the shares represented thereby. Such assignment or power of attorney may be either in blank or to a specified person.

Sec. 166. *Who may deliver a certificate.* The delivery of a certificate to transfer title in accordance with the provisions of section one hundred and sixty-two is effectual, except as provided in section one hundred and sixty-eight, though made by one having no right of possession and having no authority from the owner of the certificate or from the person purporting to transfer the title.

Sec. 167. *Endorsement effectual in spite of fraud, duress, mistake, revocation, death, incapacity or lack of consideration or authority.* The endorsement of a certificate by the person appearing by the certificate to be the owner of the shares represented thereby is effectual, except as provided in section one hundred and sixty-eight, though the endorser or transferrer: (*a*) was induced by fraud, duress, or mistake to make the endorsement or delivery, or (*b*) has revoked the delivery of the certificate, or the authority given by the endorsement or delivery of the certificate, or (*c*) has died or become legally incapacitated after the endorsement, whether before or after the delivery of the certificate, or (*d*) has received no consideration.

Sec. 168. *Rescission of transfer.* If the endorsement or de-

livery of a certificate: (*a*) was procured by fraud or duress, or (*b*) was made under such mistake as to make the endorsement or delivery inequitable; or if the delivery of a certificate was made (*c*) without authority from the owner, or (*d*) after the owner's death or legal incapacity, the possession of the certificate may be reclaimed and the transfer thereof rescinded, unless: (1) The certificate has been transferred to a purchaser for value in good faith without notice of any facts making the transfer wrongful, or (2) The injured person has elected to waive the injury, or has been guilty of laches in endeavoring to enforce his rights.

Any court of appropriate jurisdiction may enforce specifically such right to reclaim the possession of the certificate or to rescind the transfer thereof and, pending litigation, may enjoin the further transfer of the certificate or impound it.

Sec. 170. *Delivery of unendorsed certificate imposes obligation to endorse.* The delivery of a certificate by the person appearing by the certificate to be the owner thereof without the endorsement requisite for the transfer of the certificate and the shares represented thereby, but with intent to transfer such certificate or shares, shall impose an obligation, in the absence of an agreement to the contrary, upon the person so delivering, to complete the transfer by making the necessary endorsement. The transfer shall take effect as of the time when the endorsement is actually made. This obligation may be specifically enforced.

Sec. 178. *Lost or destroyed certificate.* Where a certificate has been lost or destroyed, a court of competent jurisdiction may order the issue of a new certificate therefor on service of process upon the corporation and on reasonable notice by publication, and in any other way which the court may direct, to all persons interested; and upon satisfactory proof of such loss or destruction and upon giving of a bond with sufficient surety to be approved by the court to protect the corporation or any person injured by the issue of a new certificate from any liability or expense, which it or they may incur by reason of the original certificate remaining outstanding. The court may also in its discretion order the payment of the corporation's reasonable costs and counsel fees. The issue of a new certificate under an order of the court as provided in this section shall not relieve the corporation from liability in damages to a person to whom the original certificate has been or shall be transferred for value without notice of the proceedings or of the issuance of the new certificates.[5]

[5] Taken from Goldman, Samuel P., *Handbook of Stock Exchange Laws*, pp. 213 ff.

In this connection it may be well to discuss lost and stolen certificates somewhat further. Lost and stolen certificates, if not indorsed, are not negotiable. The ownership of the shares of stock can be claimed only by the person whose name is recorded on the books of the corporation as the rightful owner and by no one else. "If a certificate of stock which has been converted or stolen, has not been indorsed in blank by the owner, no title by estoppel can be established against him in favor of a later holder or purchaser for value without notice."[6] In the case of the *Unity Banking Co.* v. *Bettman* a customer left with his broker a certificate of stock unindorsed for safe-keeping. The broker forged the owner's name and pledged the stock at a bank as security for a loan. The court held that the "bank acquired no lien on the stock as against the owner."

But if they are indorsed in blank by the true owner and the finder or fraudulent holder writes his name in the assignment blank and the corporation transfers the stock into his name, delivering a new certificate, then a purchaser for value can hold the corporation for the value of the stock but the title to the stock still inheres in the original owner.

In cases where the certificate has been indorsed in blank and is lost or stolen, or if it has been delivered to a second party without the owner's consent, then the certificate may be claimed by such owner except in the event that the certificate has been transferred to a third party who is a purchaser in good faith for value or the "injured person has elected to waive the injury, or has been guilty of laches in endeavoring to enforce his rights" when the holder for value can assert his claim against the original owner.

NEGOTIABILITY UNDER THE COMMON LAW

In those states that have not written the Uniform Stock Transfer Act into their law, the principle of the common law as to the rights of a holder in good faith for value

[6] Campbell, Douglas, *op. cit.*, p. 87.

against all claims by prior holders cannot be enforced, because the stock certificate is not negotiable. There are, however, conditions under which the holder in good faith is protected and the true owner estopped from enforcing his right of possession. For example, if a broker sells or repledges stock wrongfully which has been delivered to him by a customer indorsed in blank the buyer or pledgee can hold the stock against the original owner.

ASSIGNMENT BY AN INDIVIDUAL OWNER

1. Suppose an owner of stock has sold or desires to sell his stock through broker A, how shall he fill in the assignment blank? In order to avoid the difficulties connected with lost or stolen certificates a good plan is to mail the stock certificate unindorsed and a detached assignment form endorsed in blank under separate covers. If the separate assignment form is lost or stolen, the holder can do nothing with it unless he also has the relevant stock certificate. This will be quite unlikely especially if the two envelopes are sent by different mails. Moreover, if the stock certificate unindorsed is lost or stolen, nothing can be done with it by the finder or thief until he has the relevant detached assignment form.

If the name of broker A is written in the blank on the back of the stock certificate as the new owner, a finder of the certificate can have no claims to it, but broker A must have it transferred to his name before it is in deliverable form.

If the owner were to write the broker's name in the blank space conferring the power of attorney, then the broker must attach a form which substitutes another person to act as attorney in his place for the purpose of transferring title. For example, if a broker sold the stock represented by a certificate so indorsed as to grant him power of attorney, on delivering the certificate he would be required to attach a substitute power of attorney signed in blank or signed

with the purchasing broker's name given as the substitute attorney. A common form of a power of substitution is as follows:

> I (or we) hereby irrevocably constitute and appoint .....my (or our) substitute to transfer the within named stock under the foregoing power of attorney, with like power of substitution.
>
> Dated..... 19.....
>
> .....
>
> In the presence of
>
> .....

The simplest form of indorsement is the indorsement in blank, which consists of the signature of the owner, with the spaces for the name of the new owner and the attorney left blank. When this form of assignment is properly witnessed, the certificate may pass from hand to hand without further indorsement, the same as currency or a bearer credit instrument, as for example, a coupon bond, or bearer check. Whenever a holder desires to have the certificate recorded in his own name, he signs it in the first blank space at the top of the assignment form, leaving the space for the name of the attorney open. On receipt of the certificate the transfer agent will insert his own name into this space.

The signature of the owner to the assignment "must correspond with the name as written upon the face of the certificate in every particular without alteration or enlargement, or any change whatever" to meet the requirements of the New York Stock Exchange and exchanges generally. An unmarried woman should have the word "Miss" prefixed to her name in the face of a stock certificate. It must then be indorsed with the same prefix for transfer.

If the name of the stockholder has been misspelled or otherwise incorrectly entered on the face of the certificate, an indorsement made by writing first the name as it stands on the certificate followed by the name correctly written as is done in the case of checks, makes the certificate nondeliverable. The certificate must be returned to the corpo-

ration, which must write in the words "correct name is ....." Here the correct name is entered. The transfer agent who countersigned the certificate as originally written must sign the correction.

The assignment provides a space for the name of a witness to the signature. Any one may act as witness except that the Exchange requires that a married woman's assignment of a stock certificate must be acknowledged jointly by the husband and wife before a notary public. The assignment by a widow or unmarried woman should be acknowledged before a notary. If the unmarried woman's name is prefixed by "Miss," no such acknowledgment is necessary.

It is the custom of members of the Stock Exchange to guarantee the execution of the assignment of stock received by them from their clients for sale on the Exchange. A proper representative of the firm writes his name below that of the witness. This means that the firm guarantees to the future holder that the certificate is genuine, and that the person making the assignment has full right to do so. The law holds the firm responsible if the signature is a forgery, or if the assignment is not made with proper authority.[7] In case there is uncertainty as to the signature, the assignment should be guaranteed by the customer's bank or acknowledged by a notary public.

A certificate in proper form, properly signed in blank, properly witnessed and guaranteed by a member of the Exchange, is good delivery on the Exchange and may pass from hand to hand without modification.

2. Again, suppose an owner of stock wishes to make a loan at his bank and pledges shares of stock as collateral security, how shall he proceed with the assignments? The bank may need to sell the collateral to protect itself against loss, and requires that the stock be put into transferable form.

[7] Campbell, Douglas, *op. cit.*, p. 89.

Since the certificate will be held by a bank, it is probable that the blank indorsement will involve the least inconvenience to all concerned. If the indorsement is placed on the stock certificates, then, when the loan is paid, the bank will return the collateral to its owner, indorsed in blank. In order to avoid the risk involved in holding indorsed certificates, the usual custom is to have the borrower indorse in blank detached assignments which are destroyed upon payment of the loan and the return of the collateral. An assignment form must be filled out for each stock certificate. Each form must contain also a description of its relevant stock certificate sufficiently complete for identification of the certificate.

In case of an individual not legally competent to transfer his stock to another—for example, an infant or an insane person—the court must appoint a representative with power to transact necessary business. Such a representative, called an Attorney in Fact, when making an assignment of stock, must furnish evidence of his appointment by the court and the genuineness of his signature. What has just been said about persons legally incompetent to transact their own business applies also to persons who have made an assignment of their property to creditors or who have gone into bankruptcy. The court must now appoint a representative with legal power to take charge of the case. In making an assignment of stock the transfer agent will demand documents showing such appointment and authority, as well as evidence of the genuineness of the signature.

ASSIGNMENT BY A CORPORATION

When certificates of stock are held by a corporation, the process of transfer is more complex than in the transfer by an individual owner. The transfer agent of the company which has issued the stock must be sure that the person indorsing the assignment blank has the authority to sign for the corporation before he makes the transfer. The official

who signs for his corporation must, therefore, forward to the transfer agent, along with the indorsed certificates, certain other documents which prove beyond doubt his authority to sign.

Power to make assignments of the securities owned by a corporation may be given to certain officials by a provision in the by-laws, or by a general resolution of the board of directors, or by a special resolution giving the right to assign the securities of the company. If power is granted by the by-laws, a copy of such by-laws, properly attested, together with a statement by the secretary certifying that the particular person signing is the individual at the time holding the position indicated in the by-law, must be supplied the transfer agent. A notary public must acknowledge the assignment and the seal of the corporation impressed on it.

If no such power is conferred by the by-laws, and the board of directors, has by a resolution, conferred power in a general way upon a given official, then the transfer agent will require a copy of the resolution as it appears on the minutes and a statement certifying that the resolution is in force at the time and that the person signing is the duly elected official then holding office.

In case a special resolution is passed by the board of directors designating some particular person by name, then a copy of the resolution as it appears on the minutes must be attached to the stock certificate properly indorsed.

ASSIGNMENT BY TRUSTEES, EXECUTORS, AND ADMINISTRATORS

Transfers by trustees, executors, and administrators are the most complicated of all types of transfers. The technical requirements differ from state to state, so that every trustee, executor, or administrator must look to his own state law for the detailed requirements.

In a general way, however, when securities stand in the name of a trustee, the trustee must attach to the certifi-

cate of stock, properly indorsed, the original or a certified copy of his appointment by the court.

When stocks standing in the name of the deceased or his estate are to be transferred, the executor or administrator must supply the transfer agent with a certified copy of the will, a certificate as to its probate, evidence of authority of recent date from the court, and documents from state officials or departments giving consent to the transfer. The state is usually concerned only in so far as fees and taxes have or have not been paid. No trustee, executor, or administrator can make any transfer of securities to himself unless by special order of the court. The original, or a certified copy of such a special order, will be required by the transfer agent.

XXII

MANIPULATION IN THE STOCK MARKET

Definition of manipulation. Conditions favoring manipulation: (1) a major advance of the market; (2) a major decline of the market; (3) an easy credit situation; (4) a large floating supply of stock; (5) a hidden value; (6) technical position of the market; (7) able leadership; (8) a new issue. Methods of manipulation: (1) wash sales; (2) matched orders; (3) rumors and tips; (4) pools and manipulation. Manipulation is a very difficult business. Manipulation of new issues. Manipulation of fundamentals. Corners. Sponsored stocks. Effect of manipulation on prices.

It cannot be denied that manipulation is a factor of importance in making the prices of stocks. In the board room and beside the ticker one frequently hears the expression, "They are marking them up," or other expressions signifying a belief that stocks are more or less constantly being put up and down by powerful interests bent on bewildering the smaller trader and the public. That stocks do not go up unless they are put up by buyers and sellers or that they do not go down unless put down by sellers and buyers is implied in these statements. But that such buying or selling is always manipulation can hardly be admitted. It is more probably a matter of *bona-fide* supply and demand. That the "big interests" and the "insiders" do have a very determining influence on the market at times cannot be denied, but to call all their accumulation and distribution activities manipulation is the result of careless thinking.

DEFINITION OF MANIPULATION

The word manipulation is a sort of blanket term that covers many kinds of operations to be found on the commodity market, as well as on the stock market. It is probably true that there is more manipulation on the less well-organized markets, like the market for real estate and for

many commodities, than on the market for stocks on the Stock Exchange. It is certainly true that in the less well-organized stock markets, there is more manipulation than in the highly organized and closely supervised security markets.

Whenever a sudden rise or a sudden drop takes place in any market, the term "manipulation" affords the easy explanation and, moreover, catches the attention of various elements of the public. Why should a reporter spend valuable time and hard work in digging out the real explanation of a "mark up" of 5 or 10 points when the word "manipulation" does the trick to the perfect understanding of all concerned and leaves the impression that the reporter must be a man of great ingenuity to be able to ferret out the inner secrets of the powers behind the scenes?

The reformer, the agitator, the labor leader, and the radical are ever ready to condemn price changes by explaining them in terms of the easy and shallow phrase, "manipulation by the big interests."

It is evident to any one that the condemnatory use of the term "manipulation" by the classes above referred to is often entirely too comprehensive. Before we go further in this discussion a more exact meaning must be arrived at.

By manipulation is usually understood the creation of an artificial price by planned action, whether by one man or a group of men. A campaign is planned and executed to run the price of a stock up or to hammer it down. Manipulation may take place on the bear side as well as on the bull side. The result is always a price higher or lower than would come into being but for activities of the manipulator. Manipulation always implies the use of special power and ingenious methods in handling the market of the stock manipulated.

An example of manipulation that seems quite legitimate is found in the support which a syndicate gives to a new issue of stock by employing a broker to buy stock if the market price goes below the issue price and to sell stock

when the price goes above, so as to free the funds tied up in the purchase to support the market if a decline again sets in. Here is an artificial price due to the planned action of the syndicate. Without these operations the price would drop or, perhaps, rise, as the case may be. The support given stabilizes the price.

CONDITIONS FAVORING MANIPULATION

There is a great amount of manipulation of one sort or another going on in the market at all times, some helpful, some harmful. At times manipulation may be confined to but a relatively few stocks, while at other times there may be artificial stimulation or depression in a broad list of stocks. There are, however, certain circumstances which especially favor the manipulator. If these conditions do not exist to cooperate with his efforts, failure is imminent.

1. *A major advance of the market.* No man or set of men is big enough to swing the price of the billions upon billions of dollars' worth of securities listed on the Exchange according to their own plans. The major trend of the market is the result of actual property values, and no successful manipulator will go against the trend. What he does is to work with the trend.

The whole period of a major advance is favorable to pool operations and is their favorite time of activity. The success of pool activity lies in the ability of the pool to distribute its stock at a figure far above that indicated by fundamental factors, due to the uncritical, overstimulated psychology of the public. A bull pool that operates in a falling market and in the presence of a pessimistic public must of necessity be a failure.

2. *A major decline of the market.* Bear operations to force prices downward more rapidly than fundamental factors warrant are usually condemned most vehemently by the public. This is wanton destruction of values, and con-

demnation is severe. Wall Street is denounced, investigations are called for, and public control is demanded. The public buys stocks and winks at ingenious methods of putting up the price; it seldom sells short, and bear activities, therefore, seem to destroy values, however inflated they may be.

The manipulator on the short side of the market expects to take advantage of a fear psychology on the part of the public. Rapid declines in the market scare the public, which then rushes to sell and breaks the price, to the profit of the bear operator who has gone short at a higher level.

3. *An easy credit situation.* Manipulators on the bull side must have large amounts of liquid funds at their command and, of course, the lower the interest rate the greater the profit possibilities. Not only must the manipulators have access to ready liquid funds, but the public must be able to do the same thing. The manipulator on the bull side must buy stock and hold it until the public comes into the market. He wants easy credit to carry his stock until he can realize a profit. This also means easy credit available to the public to whom he expects to sell at a higher price.

It must be said, however, that manipulation can reach great heights with dear money. The other factors that supply the stimuli to manipulation must then be so strong that they overcome the check which dear money provides.

The bear operator, on the other hand, wants to see tightening credit conditions so that the speculators on the bull side will be hampered and the public find difficulty in carrying long stock. Buying will then be checked and selling will come into the market.

4. *A large floating supply of stock.* The prices of the stocks of corporations with a large number of shares widely distributed are, as a rule, much more difficult to manipulate than the prices of stocks of corporations that have a relatively small number of shares closely held. The Stock Ex-

change recognizes this fact when it refuses to accept on the stock list the stock of corporations unless a very substantial amount of capital stock has been issued and is outstanding at the time of listing. Again, if for any reason the amount of stock of a corporation on the stock list is diminished so that there remains only a relatively small amount of stock outstanding, the Exchange takes the stock off the stock list, and trading on the floor in that stock is ordered to cease. For example, when one corporation buys another, calls in the stock, and issues its own stock in return, a point is finally reached where the outstanding stock of the merged company is largely withdrawn from the market, so that the remainder outstanding might be bought up by a large manipulator or by a pool and a squeeze or corner engineered. To avoid such manipulation the Stock Exchange withdraws the trading privilege.

In actual practice, however, a pool or clique looking about for a stock to manipulate will select a stock with a fairly large floating supply. While a stock whose floating supply is small may be marked up easily enough, the process of accumulation and distribution is very difficult. When there is but a small supply of stock, a relatively small demand advances the price quickly. When the pool manager, therefore, tries to accumulate the stock the price goes up and the stock costs the pool a relatively high price. Moreover, the stock must be distributed at a large margin above the buying price to make the manipulation worth while to the members of the pool, since the number of shares available is small.

Stock is distributed under cover of activity, but when only a few shares are involved, each share must be turned over very frequently. Again, selling by outsiders will cause wide fluctuations in the price. The unusually high price of the stock, the extreme turnover of the floating supply, and the rapid, wide fluctuations in the price will indicate distribution so clearly that brokers will not advise its purchase and traders will be tempted to sell the stock short and smash the pool.

On the other hand, when there is a large floating supply, accumulation will not put the price up rapidly, a large number of shares can be accumulated, a good profit will accrue with a relatively small mark-up, activity in the stock can be created, and the stock can be distributed with much less danger from the professionals and without loss of confidence by the public.

5. *A hidden value.* The manipulator has much more difficulty in stirring the emotions of the public if all the essential factors in the case are out in the open and their value is a matter of common knowledge than when there is some mystery connected with the assets and earning power of the company. The hidden possibilities in oil in Mexican fields have been so treated as to fire the imagination of the speculatively inclined. For example, take the gyrations in Mexican Petroleum when it was a "market leader" a few years ago. Again, some process, like the silica gel process, which can, by carefully handled fact and rumor, be made to appear of extraordinary earning power, provides a basis on which to build a pyramid of manipulated prices. Three years ago, Davison Chemical, which had the rights to the silica gel process, on rumors of large contracts about to be closed with Standard Oil interests, made a spectacular advance. In May, 1923, Davison Chemical was selling below 21 and in December above 81 per share, but by the middle of April, 1924, the price had dropped 40. The price on August 1, 1925, was a fraction above 36.

An important invention upsets values and introduces factors that for some time remain conjectural. In a rising market, with the public highly optimistic, the dreams of the promoters of the invention can be magnified into possibilities, and then probabilities, in the minds of the public by carefully managed publicity and statements of large earnings.

The tremendous profits that seemed potential in the De Lavaud process of centrifugally making cast-iron pipe, backed up by large actual earnings, afforded the required

mystery factor in United States Cast Iron Pipe and Foundry Company in the latter part of 1924 and early months of 1925. From a low of 20 in July, 1923, the price of the stock of United States Cast Iron Pipe climbed to 69 in December, then fell back to 64 in February, 1924, and after some uncertainty began to climb, reaching something like 112 about October 1, and 160 on January 5, 1925. From this point the price mounted to 250 in 32 trading days, of which 5 were Saturdays. The market was overbought, rumors of competition from France began to be spread, some orders for pipe were going to French manufacturers substantially below American prices, and by April 22, the common stock of United States Cast Iron Pipe and Foundry Company was selling as low as 131.

Just how much manipulation took place in the stocks named no one can tell, but the point here aimed at is the fact that the element of the unknown, the mysterious, provides one of the main pillars upon which manipulation builds its structure.

What has been said of the factor of mystery on the bull side of the market is equally true of the bear side. In a declining market an injection of the unknown quickly scares the public into an avalanche of selling. The oil companies with large interests in Mexico have felt the effect of the "salt water" scares again and again the last five years. This factor of uncertainty in the Mexican oil fields is a constant menace to the best wells as well as to the poorest, and a few facts and much rumor turn the trick. Into such psychology the manipulator can gear his machinery and get results if he does not miscalculate.

On the whole, manipulation for the rise is more successful than for the decline. The public goes long on stock but seldom sells short. This favors the operator on the constructive side as against the manufacturer of artificially low prices on the bear side of the market.

6. *Technical position of the market.* When the market is

technically strong—for example, when it is oversold—the operator for the rise finds the stage set to his purpose, and, unless the fundamental condition of the market is too unfavorable, the shorts can be driven to cover, resulting in a rapid rise in prices of stocks involved.

On the other hand, when the market is in a weak technical position, the operator for the decline can break the price by planned drives against stocks in a vulnerable position, because they have been overbought, or because the support beneath them has been withdrawn. At such times numerous stop-loss orders very probably have been placed just below the market, and drives against selected stocks will uncover the stops and break the price for a number of points.

7. *Able leadership.* All the conditions potential to manipulation may exist, but unless an able and powerful personality enters the arena and provides the proper management of the potential elements, nothing out of the ordinary will happen. Stocks must be "taken up" and sponsored, their possibilities must be brought vividly to the attention of the public, potentialities must be made the most of, the mystery factors must be pointed out and properly introduced to the imagination of many people. Moreover, when the marking-up stage has arrived, the stock must be kept active on the Exchange with occasional advances of several points in a day.

Very worthy stocks often get far behind the market because they have no sponsors. One of the puzzles of the market during the summer of 1925 was the price of the common stock of the Studebaker Corporation. With Nash selling far above 400 to yield about 4½% and General Motors, Hudson, and others mounting in price, Studebaker was selling around 46 to yield 8% or better. Banking interests that made Studebaker one of the outstanding leaders of the market several years ago were said to have given up their operation in this stock, and no new leadership was forthcoming. Nash was said to have large "hidden assets,"

a mystery element, and was well sponsored. Studebaker had no one to inject the mystery factor and had a relatively large number of shares widely held, so that manipulation was difficult. In other words, in the case of Studebaker the surrounding circumstances were not of a nature to stimulate manipulation as in the case of Nash. Add to this the lack of leadership, and no one could expect any fireworks.

8. *A new issue.* After a syndicate of bankers has floated an issue of stock, but before the shares have found a wide distribution, or have attained a more or less settled position in the market, the syndicate which floated the issue feels it a duty to its clients to help create a place in the market for the stock. To be sure, this is also good business policy on the part of the syndicate. Until the stock has won for itself a wide following, it needs support, and buyers expect that when they buy from large, responsible firms, a stable market will be maintained.

The flotation of an issue of stock by a responsible syndicate or group of bankers thus creates a situation which calls for a type of manipulation that may be quite legitimate if the stock so supported has real value.

METHODS OF MANIPULATION

The history of the Stock Exchange reveals a great variety of methods of creating artificial value. Most of these methods are no longer permitted, either by law or by the rules governing the practices of the Exchange. There is, however, always room for manipulation when the conditions are ripe, and the only way to stop manipulation entirely would be to close the Exchange.

1. *Wash sales.* Wash sales are fictitious transactions in which no change of ownership takes place. For example, an operator who is long on stock or is hired to create a market for a given stock agrees with other operators on a price above the market at which the holder will sell and at

which his confederate shall buy. No change of ownership takes place, and the buyer, by agreement, incurs no financial obligation to the seller of the stock. The sale is purely fictitious, but it creates market activity in the stock, keeps the stock on the ticker and the financial page, and makes it appear in a strong position because of its activity and advance in price. The purpose is to deceive buyers who become interested and take the stock off the trickster's hands at an artificially high level.

Every reputable exchange throughout the country prohibits wash sales. The Constitution of the New York Stock Exchange provides for the expulsion of any member of the Exchange involved directly or indirectly in any such fictitious transaction, provided he knows the character of the transaction or might have known it if he had exercised reasonable caution. Section 3 of Article XVII of the Constitution of the Exchange provides as follows:

> A member who shall be adjudged by a majority of all the existing members of the Governing Committee guilty of making a fictitious transaction or of giving an order for the purchase or sale of securities, the execution of which would involve no change of ownership, or of executing such an order with knowledge of its character, shall be suspended or expelled as said Committee shall determine.[1]

In December, 1908, Charles E. Hughes, then governor of the state of New York, appointed a committee, with Horace White as chairman, to investigate the methods of speculation in securities and commodities. This committee, usually called the Hughes Commission, in its report, submitted in 1909, made the following recommendation:

> So far as manipulation of either class is based upon fictitious so-called wash sales, it is open to the severest condemnation, and should be prevented by all possible means. These fictitious sales are forbidden by the rules of all the regular exchanges, and are not enforceable at law. They are less frequent than many persons suppose. A transaction must take place on the floor of the Exchange to be reported, and if not reported does not serve the

[1] The Constitution of the New York Stock Exchange, 1925, p. 43.

purpose of those who engage in it. If it takes place on the floor of the Exchange, but is purely a pretense, the brokers involved run the risk of detection and expulsion, which is to them a sentence of financial death.

2. *Matched orders.* Continuing the above paragraph the Hughes Commission defines matched orders as follows:

"There is, however, another class of transactions called 'matched orders,' which differ materially from those already mentioned, in that they are actual and enforceable contracts. We refer to that class of transactions, engineered by some manipulator, who sends a number of orders simultaneously to different brokers, some to buy and some to sell. These brokers, without knowing that other brokers have countervailing orders from the same principal, execute their orders upon the floor of the Exchange, and the transactions become binding contracts; they cause an appearance of activity in a certain security which is unreal. Since they are legal and binding, we find a difficulty in suggesting a legislative remedy." The commission recommends that the officers of the Exchange do all in their power to stop the practice by prompt action against this class of transactions.

The New York Stock Exchange prohibits matched orders.[2] The state of New York has had a law on its books for more than 10 years prohibiting the practice, but it is doubtful if such legislation can accomplish much, because it is very difficult to distinguish between legitimate buying and selling, and matched orders distributed to various brokers who are quite ignorant of the nature of the transaction. Again, the New York law does not apply to operators outside the state.[3] The Exchange may prevent this class of transactions on the part of its members, but since an outsider giving such orders must keep their nature strictly secret, to be effective, matched orders given by customers of members are impossible to prevent. The purpose of this class of transactions is either to unload a lot of long stock

[2] *Ibid.*, p. 43.

[3] Huebner, S. S., *The Stock Market*, p. 327.

at as high price as possible or to accumulate at a very low price. To accomplish this a large operator must observe strict secrecy as to the two-sided nature of his activities. The forbidden transactions, therefore, can be exposed only with the greatest difficulty.

The present method of manipulation usually consists of a series of buying and selling orders. An operator for the decline will sell several large blocks of stock, thus hammering the market down, and then buy back in smaller lots, at a lower price, cover for his short sale. He sells and buys in such a manner as experience and the condition of the market seem to require to put the price down. There is not necessarily any thought of wash sales or matched orders in this kind of thing at any moment.

In case the operator is playing for an advance, he buys large blocks, raising the price, and then sells out as he can without breaking the advance. After he has sold, he has funds to repeat the operation. There may be no set method in the buying and selling. Experience and circumstance may decide from hour to hour what shall be done. Pools and large operators need not employ wash sales, for the above kind of market activity accomplishes the same end more efficiently than the older methods.

When California Petroleum was placed on the New York Stock Exchange, the bankers sponsoring it employed Lewisohn Brothers to make a market for the stock.[4] Each day the brokers put with various brokers orders to sell on a scale up and buy on a scale down. The number bought and sold each day thus depended on market conditions. On one day, purchase might amount to 6,000 shares and sales 11,200, and the next day 8,900 might be bought and only 4,000 sold. Beginning with October 5, through a period of 22 trading days ending October 31, 1912, 153,000 shares were bought and 173,000 shares sold by the brokers. The price advanced from about 62½ to 72. Thus, through

[4] See *Report of Pujo Committee*, 1913; see also Atwood, A. W., *The Stock and Produce Exchange*, p. 268.

a turnover of 326,000 shares by the brokers in 22 trading days, 20,000 shares were distributed, and the price advanced 9½ points. The total purchases and sales in the market amounted to somewhat over 362,000 shares, that is, public participation amounted to 36,000 shares.

In Table 24 are given the purchases and sales by the brokers day by day.

3. *Rumors and tips.* In May, 1925, Baldwin Locomotive was down to 110, the air was full of tips to sell Baldwin. Soon, however, the price began to advance rapidly, and when it got to 120, the tips were reversed and the purchase of Baldwin was strongly urged. Of course, a steep decline followed. Rumors of stock dividends and melon cutting at the next meeting of the board of directors; of interviews by leading directors or men having the ear of leading members of the board of directors, intimating large earnings and stock split-up or extra cash dividends; of the success of new processes and of patents already proved or about to be proved of extraordinary earning power, were, at the psychological moment, put afloat to stimulate enthusiasm and put the market up. Rumors of mergers have always been fruitful of results. This has been especially true of the steel and motor industries, and of the railroads, in recent years. Now

TABLE 24

PURCHASES AND SALES OF CALIFORNIA PETROLEUM, DAY BY DAY

DATE	PURCHASES	SALES	DATE	PURCHASES	SALES
October			October		
5	6,000	11,200	19	5,100	2,700
7	8,900	4,000	21	7,900	8,200
8	6,500	7,100	22	6,400	10,900
9	3,100	3,800	23	11,000	9,400
10	13,000	17,100	24	7,900	7,900
11	6,300	5,800	25	5,200	5,800
14	2,300	1,900	26	3,100	2,500
15	4,400	7,300	28	4,300	9,800
16	10,400	13,000	29	6,300	7,200
17	11,000	14,200	30	9,000	8,600
18	10,400	9,300	31	4,500	5,200

Bethlehem is made the center of a merger, now Youngstown Sheet and Tube, now Gulf State Steel, and now the Union Trust interests, aided by large New York banks, are about to merge a group of the smaller concerns. The consolidation of the railroads to be accomplished within the near future will supply the wherewithal of many a rumor causing a rally in the price of this or that minor railroad stock. Rumors of large hidden assets, immense coal holdings all undeveloped, tremendous oil potentialities, and so forth, stimulate dreams of quickly realized gains in enormous amounts. At the moment, the scientific exploitation of our water-power resources and the limitless profit possibilities in the production and distribution of electrical energy have caught the imagination of the public.

Plausible tips as to the operations of the "insider" or the "big interests" properly intermingled with one or more of the kind of rumors mentioned above, help to make the artificial stimulus situation more palatable.

Operators for the decline have a number of ways and means similar to those of their friends on the constructive side of the market. On Friday, July 31, 1925, the Street was full of rumors of the assassination of President Coolidge, the death of John D. Rockefeller, and of Governor Smith of New York. The market declined sharply but scored a good comeback before the close. The following paragraph in the market review of the *Wall Street Journal* of August 1 probably explains the origin of some of these rumors:

> Most of the offerings appeared to be of professional origin. An organized bear crowd, mostly composed of floor traders, had been greatly encouraged by the market's failure to show rallying power in the previous session. This clique kept hammering away at selected points on the theory that stop orders could be caught in profusion if recessions of one or two points were brought about in pivotal issues.

Rumors of passing dividends, of accumulating inventories, of strikes, of bankruptcy, of earthquakes, of salt water

breaking into oil wells, of the spread of radical sentiment, of unfavorable foreign political disturbances, all provide the basis for drives against the market and the destruction of values.

Rumors, tips, advices, and propaganda of all kinds get wide circulation over the private wires of brokerage houses, through the financial page, and through the medium of letters and circulars sent through the mails. They are, without doubt, an important factor in manipulation. The wise trader and investor know that at best their effect can be but temporary and pay little attention except to condemn.

4. *Pools and manipulation.* A group of men proposes to put a stock up, perhaps down, in price. To do this, wise leadership and ample resources must be available. The men who make up a pool may all be professional traders, or they may be large stockholders, officials, directors, and bankers, who hire an expert operator to direct the stock-market activities. In any case an organization is formed and agreements are made as to the amount of money each member is to contribute to the pool, the share of profits he is to receive, and the part in the pool's policies each shall have. Safeguards are set up against "leaking" on the pool by any member.

The permanence of pools varies from that of a group of traders who pool certain of their resources for concerted action to put a stock up, or to make a violent bear drive for a quick turnover, to that of a pool made up of bankers, large operators, officials, and directors who operate on the major trend and therefore must stay in existence month after month, or even year after year, changing from one side of the market to the other.

The members of a pool appoint a firm or operator of experience in such matters to direct the buying and selling on the exchange and to manage the affairs of the pool generally. In case the manager is given full power to operate on the market without knowledge of his activities on the part

of the members, the organization is known as a "blind pool." Here no member knows what is going on. He contributes his funds, promises not to buy or sell any stock, and has nothing to say except that he has the right to share the profits, if the pool is successful.

After participating in a corner in Erie which netted him nearly seven millions of dollars, Daniel Drew was invited into a blind pool by Gould and Fisk. As Clews puts it, "In plain terms, he was coolly requested to go into a 'blind pool' in Erie, deposit four millions, shut his eyes and open his mouth, leaving the Erie sharpers to put taffy or candy into it, just as they pleased."[5] When Drew saw that "he was to be one of the puppets that should dance to the music of Gould and Fisk, and let them pull the wool over his eyes," he withdrew from the pool, but it cost him a million dollars.

The above example of a blind pool dates back to 1868 and shows that blind pools have had a long and, in some cases, at least, a ruthless history.

Sometimes the owners of large blocks of stock see financial distress ahead for their company and in order to unload their stock form a pool, taking in as associate members brokerage houses and brokers throughout the country. Many of these firms, never having had any experience with pools, and having heard a great deal about their profit possibilities, go into the pool. The game is to bring on to New York managers of these firms, let them meet leading members of the pool and the pool manager, who feeds up these newcomers upon the wonders of the business of the company, the ability of its officers, and the attractive profits within the grasp of pool members. These men now come back to their home offices very enthusiastic and call in their clients and in whispers tell of the honor bestowed on their firm in being let in on a big pool, and of the big profits this will mean to themselves and their customers. If the client seems doubtful as to the situation, they tell of meeting the members of the pool and the pool manager, of their own

[5] Clews, Henry, *Twenty-eight Years in Wall Street*, p. 142.

part, perhaps, in forming the organization, and that they themselves are buying heavily into the stock. The client is impressed with the sincerity and enthusiasm of his brokers, and buys. Meanwhile dozens of firms in many cities are doing the same thing, and this buying is putting the price up. As the stock goes up, these associate members grow more enthusiastic and buy more stock for their own account and get more customers in. Finally, after the stock has been making new highs but never having nearly reached the high that was promised, the price begins to sag and finally to drop rapidly. The associate members and their clients hold all the stock, having sold very little on the decline because a much higher price is expected on the next rally. Instead, the price makes new lows, the inside members of the pool having unloaded on the associate members. This type is well named as a "sucker" pool.

If ever one's broker or banker gives one a tip that a certain stock is about to rise from $10 a share to $35 because there is a pool in it and that he knows all about the rise because he is a member of the pool, the best thing to do is to suspect a "sucker" pool and stay out.

In the "regular" or usual bull pool the first thing on the manager's program is to get control of the floating supply of stock. To do this, large holders are brought into the pool and no member is allowed to unload his stock. James R. Keene, often called the greatest operator of all time, in the Whiskey pool is said to have taken a record of all the stock certificates held by members of the pool so that if any member "leaked," that is, sold stock after the price had been put up, such action might be detected from the numbers on the certificates coming on the market.

The next step in getting control of the floating supply is to accumulate it by buying on the market. This requires plentiful credit and time, perhaps a few weeks, perhaps a few months. Stocks, of course, must be accumulated at a low price. To induce holders to sell at a bottom figure, reactions in the market are exaggerated by concerted selling,

rumors of financial difficulty ahead, of small earnings, of new financing, and so forth. The price of the stock will be run up a few points and then left to sink back below its former level. No permanent advance is permitted. The newspapers call attention to the false starts followed by reactions, and no progress made. This goes on week after week until holders get disgusted with their stock and sell out. After the potential floating supply has been accumulated, the next step is the marking-up process. The price must be put up, or no profits can accrue.

The marking-up process is accomplished by buying stocks, and, when the price advances, they are sold so as to provide liquid funds for further purchases. Since the remaining floating supply is small, the price advances quickly on open buying. The selling is done cautiously and under cover. After the price begins to go up, the public waits for a reaction which does not materialize. Finally, after the stock has been active for some time and the price has been marked up many points, the public waits no longer for a reaction but rushes in to buy. If buying comes in too briskly, there will follow a shake-out. The pool will withdraw its support and sell the stock, causing a reaction which scares the public into selling. The bull pool manager does not want to carry the public up with him and gets them to sell their long stock. If he did not do this, they would be unloading the long stock on him long before the price had reached the goal set by the pool. After the reaction has accomplished its purpose, the manager resumes his former tactics of activity, good news, favorable rumors, and tips. The price is again marked up. The wheels of the publicity machinery are humming. Tips to buy are whispered to a few friends who, according to human nature, pass them on, officials and members of the board of directors begin to talk of the "satisfactory" earnings, the strong financial position of the company, and the bright outlook of the business. Reporters, always ready to boost, seek interviews with people on the inside, and the newspapers broadcast the fact that A. B. C. and Company

has "one hundred millions of cash," that it is in a "strong financial position," that its leading director, on leaving for Europe, was "very hopeful of the outlook for business." Meanwhile people are buying the stock and paper profits are piling up. They are getting their friends to purchase, and the market is constantly advancing. When the market for the stock becomes very active and everybody is enthusiastically buying into A. B. C. and Company, the psychological moment for distribution has arrived.

The process of distribution at a high price requires first-rate generalship. Any moment something may happen to burst the bubble. Many pools that were very successful in accumulating the stock and in marking it up to a high price failed in the distribution process. Sometimes the pool can unload quickly, but again it may take months. The pool manager must be prepared to buy and sell many hundreds of shares to reduce his holdings by a hundred shares.

The machinery of publicity is speeded up, and rumors are started of extra dividends, of melon cuttings, of a split up of the stock, of hidden assets; in short, the whole gamut is run if necessary. Directors are kept busy with interviews, earning statements are given out, and rumors of mergers are in the air. Everything comes from "people on the inside," "authoritative quarters," or "large banking interests." The market for the stock is supported when bad news should make it react. This makes the stock seem especially strong. The financial page calls attention to this fact. The manager gives buying orders to brokers that are reported to frequently execute orders for the Standard Oil people, for the Morgan interests, or the First National Bank group. Buying by this broker to support the price is announced in this way: "Broker X, closely connected with the Morgan interests, is buying large blocks of A. B. C. and Company." Meanwhile, the manager is selling in small lots through many different brokers.

Frequently, other stocks are bought to make the market appear strong. If a motor stock is being manipulated, some

other leading motor is made to rally, or a popular steel or equipment is made to appear strong. Today one stock is taken up, tomorrow another, and the next day still another, or, perhaps, several at a time. Meanwhile, the manager is quietly selling out his stock under cover of the appearance of strength which he has himself created. Sometimes the stock is given a final run up above all previous tops. People have been harangued to buy on reactions and play into the hands of the manipulators, who unload rapidly during the reaction that follows the extreme run up, but at a price that is very satisfactory.

The period of distribution is followed by a period of decline. This period begins while fundamental conditions are all still strong and perhaps in a great boom. The newspapers are full of glowing reports of earnings and of lasting prosperity. The stock, nevertheless, declines. Officials of the company, or their spokesmen, or the pool manager, give out interviews condemning the destructive element in the market, bear raids, and manipulation. Occasional rallies keep up the hope of the public who see that business is still good and the outlook without a cloud and, therefore, their stock must come back. But the stock declines and the weakest of the public are selling until the price has declined a long way, when many lose hope and an avalanche of selling comes out and drives the price down below the stock's intrinsic value. The pool, if a continuous one, has its resources in liquid condition and is beginning to accumulate the stock preparatory for another cycle.

The effects of pool operations on prices is clearly shown in the case of the market for Seneca Copper in the latter part of 1921. A leading New York pool manager was hired to make a market for the stock. A contract was drawn up whereby the manager agreed to maintain a continuous market, and the members of the pool gave him a call on 100,000 shares of Seneca Copper at 15, about 1 point below the current price at the time of the agreement. The manager was given the authority to buy and sell Seneca for the ac-

count of the members. Besides, he sold short against his call on advances in the price to provide for support in declines.

Brokers had confidence in the ability of the management and advised their customers to buy Seneca. By the end of the year Seneca Copper had advanced to a high of 25⅛, and a market had been developed that took 500 shares with but one-eighth point decline from the preceding sale. Now, for various reasons, the syndicate, in whose name buying orders had been placed with brokers by the manager, canceled these orders. Very quickly the price of the stock dropped from 22, the price then obtaining, to 18 and by January 25, 1922, to 16. Manipulation must thus be given the credit for much of the advance from 15 to 25.

MANIPULATION IS A VERY DIFFICULT BUSINESS

The temporary concerted action of floor traders or cliques in the market is always fraught with danger, and the manipulation of the stock of a large corporation for many points' gain throughout a major cycle is one that ends in failure about as often as in success. The hazards are very great. In the first place, no major bull manipulation can win out except in an advancing market, and if the manipulator has misjudged the future trend or fails to time his activities in accord with the movements of the market as a whole, failure is almost inevitable. No one pool can carry the whole market, and if its manager proceeds to mark up his stock at what seems to be the beginning of the major advance, but turns out to be but a rally in a decline that is still not nearly spent, he may get hooked with so much stock that his finances will not stand the strain.

Again, large blocks of stock may come into the market, of which he knew nothing. He may not know of European holdings which may be sold when the price has been marked up but half as much as was planned. Perhaps it may come upon the market when distribution is taking place, break

the price, and destroy the good-will that the pool has built up at considerable cost.

Furthermore, counter-pools may be formed to sell the stock at the high level, break the price, and cash in at lower levels. There are always great bear operators watching for inflated prices and extended pools in order to smash them, at a profit to themselves.

A notable case of the failure of a pool with large loss to the pool members was that in the common stock of the Chicago, Rock Island & Pacific Railroad in 1922. Early in the year large brokerage interests foresaw the return of prosperity and the rise of stock prices. The railroads seemed attractive, and among them the common stock of Rock Island offered, in their judgment, excellent profit possibilities. A syndicate with $1,000,000 capital was organized to buy the common stock of Rock Island when the price was low and sell on advances. On February 24, 1922, the brokers sent out invitations to parties of their choice to participate in the pool. The maximum number of shares held by the syndicate at any one time was to be 100,000 shares. The brokers, who participated in the underwriting and acted as bankers for the pool, together with the manager, were to receive 25% of the net profits. Each member of the syndicate was to be allotted a certain number of shares and was to pay $10 per share on his allotment at once. He was liable for the number of shares allotted to him. It was reported that Jesse L. Livermore, noted for his ability as an operator, was made manager and given the right to buy and sell and otherwise deal in the shares at his own discretion.

Table 25 gives an account of transactions of the manager.

The interests involved in the syndicate had not foreseen the strikes in the coal industry and the shopmen's strike which came during the summer. Those strikes held up traffic, and so increased expenses that the public became doubtful as to the earnings of Rock Island and sold the stock. The syndicate bought heavily at a high price expecting to distribute much higher up but the declining market

TABLE 25

TRANSACTIONS OF ROCK ISLAND POOL, 1922*

MONTH	PURCHASES	SALES	ON HAND AT END OF MONTH	PRICE
Feb. 20-23	15,000	.....	.....	35¼-40
Feb. 27 and 28	.....	10,000	5,000	40 -42
March	.....	5,000	.....	40 -40⅞
April	219,200	156,000	63,200	43⅜-48⅛
May	34,700	25,600	72,300	43 -46⅝
June	15,400	11,600	76,100	40 -45⅝
July	9,100	11,700	73,500	42⅝-44¼
August	4,700	9,400	68,800	45 -46½
Sept.	33,700	82,500	20,000	44¼-49¾
Oct.	16,200	16,200	20,000	40 -45¼
Nov.	24,000	1,000	43,000	32½-36¾

*From *Wall Street Journal*, December 18, 1922.

thwarted all this, and at the end of November the syndicate had 43,000 shares on its hands. December 4, each member was called upon to take up 43 shares for every 100 of his allotment at a cost of $44.01 per share, when the shares were selling on the market at about $33. This meant a loss of $11 per share on 43,000 shares, or $473,000 to the pool as a whole.

To show that the failure of a pool is almost inevitable unless it is built upon a large basis of sound value, another case is here given.

In the early spring of 1924, reports of the existence of oil deposits in different parts of Colorado were being published by the newspapers. Now, the Colorado Fuel and Iron Company, with property in various sections of Colorado, was controlled by the Rockefeller interests. It happened that these Rockefeller interests were also greatly interested in the development of oil resources. Here, then, were big interests, large possible earnings, and plenty of mystery all combining to make an excellent background for pool activities. A pool was formed in June, and by the end of the month had marked up the price from around 33 to above 47. The advance continued throughout July, and attained its

high point a fraction above 54 early in August, a gain of about 21 points over the price at which the first shares had been accumulated.

Meanwhile, about July 1 the president of the Colorado Fuel and Iron Company had issued a statement to the effect that the company was not developing any of its own territory and did not consider spending any of its money in such an undertaking. The company had, however, leased one "small" acreage to a reliable oil company and might make further leases. Thus, without expense to itself, the company's lands would be tested to find oil if any existed.

Some years ago it was the practice for executives of large corporations to remain silent when questionable rumors as to their properties were circulated, but in the past few years, with the widespread distribution of shares of stock among the public, executives have felt it a duty to protect their stockholders or prospective stockholders against the designs of manipulators by stating the facts in the case.

Less than a year ago, Mr. Vauclain, of the Baldwin Locomotive Works, had occasion to state that the Diesel engine which his company is developing was in the experimental stage and that nothing out of the ordinary was expected by the people concerned. This was in the way of offsetting rumors as to the marvelous advantages of the new developments and the extraordinary earnings that might be expected. Baldwin common would surely do what United States Cast Iron Pipe had done. The statement of the facts had its proper effect.

In the statement issued by the president of the Colorado Fuel and Iron Company, however, were found a number of points that could be played up to the public, and the clique at once proceeded to do so. The public came in strong, entirely unmindful of the fact that no oil had been found on the property, that if it were found, unusual quantities would have to be produced to yield much profit per share on over 342,000 shares of common and 20,000 shares of preferred stock, with production on a royalty basis under a lease, and

that the oil business was on its back, with overproduction and oil stocks selling much below the rest of the market and with few, if any, indications of improvement ahead.

When the pool seemed certain of success something suddenly happened. By some unknown agency large blocks of the stock of the Colorado Fuel and Iron Company were thrown upon the market. The price broke rapidly and in a few days lost nearly as many points as had been gained. The pool lost heavily.

The dangers involved in pool operations remind one of a recent statement made to a friend by the late Richard H. Halsted, an active member of the New York Stock Exchange for 50 years.

> Market manipulation has always seemed to me a dismal sort of comic opera. Values are not accidents. Quotations may be blown a while like soap bubbles, brilliant and bursting; or may be kicked about a while like cripples. But I've been on the Stock Exchange around 50 years, and never yet have I known one instance where there has not been establishment for what is provable value, big or little. Avarice may make one overeager to dip into what is not seasoned; or cases of nerves may make one tumble out of safe things. In 9 out of 10 examples of losses that investors take, my observation is that those losses are due to neglect of calculation based on knowledge, sometimes the result of unconsidering impulse, sometimes caused by anxieties begotten by pessimistic falsifications.

MANIPULATION OF NEW ISSUES

A syndicate of bankers, having sold a new issue of stock, feel that they must protect the retailers in their work of distribution of the stock to the public and the retailers' customers. This means that the price of the stock must be maintained and that a market must be made for it. A firm of brokers or a large operator is employed by the bankers to make a market. The usual procedure is to give orders to sell a specified number of shares on a scale up, and to buy on a scale down. The buying and selling is regulated according to the conditions of the market. The aim of the

operation is to stabilize the price, to inject some upward tendencies, to bring the stock before the public, and to build up as broad a market for the stock as possible. When this has been accomplished, the stock is left to take its own course.

This type of manipulation appears perfectly legitimate when done in good faith, when full value is represented in the stock, and when the future seems reasonably assured. It then only remains to establish these facts in the minds of the public by support of the market.

The Hughes Commission of 1913 found no objection against this type of manipulation. Under the caption "Manipulation of Prices," their report states the case in the following manner:

> A subject to which we have devoted much time and thought is that of manipulation of prices by large interests. This falls into two general classes:
>
> 1. That which is resorted to for the purpose of making a market for issues of new securities.
>
> 2. That which is designed to serve merely speculative purposes in the endeavor to make a profit as the result of fluctuations which have been planned in advance.
>
> The first kind of manipulation has certain advantages, and when not accompanied by "matched orders" is unobjectionable *per se*. It is essential to the organization and carrying through of important enterprises, such as large corporations, that the organizers should be able to raise the money necessary to complete them. This can be done only by the sale of securities. Large blocks of securities, such as are frequently issued by railroad and other companies, cannot be sold over the counter or directly to the ultimate investor, whose confidence in them can, as a rule, be only gradually established. They must, therefore, if sold at all, be disposed of to some syndicate, who will in turn pass them on to middlemen or speculators, until, in the course of time, they find their way into the boxes of investors. But prudent investors are not likely to be induced to buy securities which are not regularly quoted on some exchange, and which they cannot sell, or on which they cannot borrow money at their pleasure. If the securities are really good, and bids and offers *bona fide*, open to all sellers and buyers, the operation is harmless. It is merely a method of bringing new investments into public notice.

The second kind of manipulation mentioned is undoubtedly open to serious criticism. It has for its object either the creation of high prices for particular stocks, in order to draw in the public as buyers and to unload upon them the holdings of the operators, or to depress the prices and induce the public to sell. There have been instances of gross and unjustifiable manipulation of securities, as in the case of American Ice stock. While we have been unable to discover any complete remedy short of abolishing the Stock Exchange itself, we are convinced that the Exchange can prevent the worst forms of this evil by exercising its influence and authority over the members to prevent them. When continued manipulation exists, it is patent to experienced observers.

MANIPULATION OF FUNDAMENTALS

A generation ago the standards of business permitted boards of directors and officers of corporations to manipulate earnings, dividends, and the property of their company in such a manner as to cause great fluctuations in the price of the stock of the concern. A railroad or industrial corporation was made to appear very prosperous, extra cash dividends were declared, and melons were cut. The price of the stock rose high and these insiders sold out. After they were sold out, earnings were made to appear small, rumors of distress were floated, the cash available was meager in amount, dividends were passed. The price of the stock declined to a bottom figure, when the officials and the board and large stockholders bought it back, knowing that earnings would again show a gain and that the cash saved the previous year would enable large dividends or extra dividends to be paid. The price now went up, and the stock was again distributed.

It is difficult to say that these men did wrong. They paid out liberally when earnings were large, and conserved when earnings were small. No one can be brought into court for doing this sort of thing, for no one could pay dividends when earnings were small. And, on the other hand, when earnings were large, the stockholders were entitled to the product of their capital investment. This kind of divi-

dend policy alone tended to produce extreme fluctuations in prices, to say nothing of the effect of the manipulation of statistics, balance sheets, and income accounts, and the manufacturers of rumors intended to deceive. Business standards along these lines have made a great advance. Executives of railroad companies and our largest industrial corporations now feel a responsibility to the community to minimize fluctuations in the company's securities and to stabilize business activities. Manipulation such as went on in the railroads, oils, coppers, steels, and other lines due to the attempts of men in positions of executive power to accumulate great wealth can no longer be tolerated. This, however, must not be construed to mean that business and industry are free from manipulation with an eye on the effect such manipulation will have on the profits large stockholders can make in the stock market. There are entirely too many cases of such practices still in existence in our free country.

CORNERS

In the case of a monopoly, a large interest owns the supply of, say, wheat, but the people are not bound by any contract or agreement to buy and consume wheat or its products. They can use substitutes to some extent. In a corner in wheat, however, the interests that control the supply also have in their possession contracts of agreements calling for delivery of wheat by persons who have sold such contracts to deliver wheat, but have none in their possession, expecting, however, to fulfill the contract by ultimately buying wheat in the market. Now, since the holders of the contracts are the only source of supply of wheat, they can compel the short interests to pay a very high price for the wheat required to satisfy their contractual obligations.

Corners in the stock market may be of two kinds: natural and manipulated. In the case of a natural corner a group of individuals, through the regular course of investing and trading, find themselves in possession of the control of the

stock of a given corporation. Without planning or intention, the regular chain of circumstances puts control in their hands. But once conscious of holding control, such persons begin to utilize it and force a corner.

One of the most notable corners in the history of the New York Stock Exchange occurred May 9, 1901, when the Hill-Morgan interests, on the one hand, and the Harriman interests, on the other, were attempting to get control of the Northern Pacific Railroad. The Hill-Morgan interests represented the Northern Pacific and Great Northern Railroads and the so-called Harriman–Kuhn, Loeb Syndicate represented the Union Pacific. Each group wanted a controlling interest in the Chicago, Burlington, and Quincy Railway in order to get an outlet into Chicago for their own systems. The Hill-Morgan interests won out by buying practically all of the Burlington stock and refusing to allow the Union Pacific people participation in stock ownership.

The next move on the part of the Harriman group was to buy control in the Northern Pacific, which owned half of the stock of the Burlington. Here the fireworks began. The two most powerful financial groups in the country were pitted against each other. As the price advanced, a large short interest was built up. There seemed to be no reason in fundamentals for any great advance in the price of Northern Pacific, and many traders, thinking the bubble must soon burst, sold the stock heavily, little knowing what was really going on.

The latter part of January, 1901, the stock was selling around 77 and 78; April 2, at somewhat above 100; May 3, at 115; May 6, high 133; May 7, high 150 and low 127; May 8, high 180, low 145; and May 9, high 700 and low 160.

Without any intention on the part of the contending interests to manipulate a corner, one had actually come into existence as the result of the chain of circumstances arising out of the contest between the two powerful groups. When the extended short interest saw their situation and began to

cover, they found that these two groups had all the stock, and also had their contracts forcing delivery of the stock. Out of a total of 800,000 shares of common stock outstanding, about 636,000 shares were sold during the week of the corner and on the day of the corner, May 9, at a quotation of 700, few shares were to be had, and the story runs that the shorts were offered settlement at $1,000 per share.

The effect of the corner was to demoralize completely prices of stocks. The short interests were compelled to liquidate large blocks of their long stocks in order to buy Northern Pacific. Such stocks as Pennsylvania Railroad dropped from 147 to 137; New York Central, 153 to 140; Delaware and Hudson, 165 to 105; United States Steel, 47 to 24. Total sales for the day of the corner amounted to over 3,281,000 shares, the record to November, 1925. Support came into the market on May 10, and while on May 9 the average high price of eight leading rails was 134.75 and low 108.63, a decline of over 26 points, yet on the next day the highs for the same rails averaged 133.70.[6]

The manipulated corner is, as its name implies, one that is deliberately, maliciously planned and executed with all the ingenuity at the command of the manipulators.[7]

The method of procedure in carrying through a manipulated corner involves three stages: (1) the accumulation of the floating supply of stock; (2) the stimulation of a large short interest; and (3) managing the delivery of stocks by the short interest.

Large interests may be holding the large amounts of the stock when operators for the decline begin to mark it down. Knowing the number of shares outstanding, and the probable potential floating supply, they buy additional stock from the bears in it until they hold a preponderant amount. To encourage the short interest, the manipulators lend stock freely through different brokers so that the floating supply

[6] See Huebner, S. S., *The Stock Market*, p. 337.

[7] See Atwood, A. A., *The Stock and Produce Exchange*, pp. 273 and 274.

appears large and the technical position weak. Rumors, publicity, and a declining market do the rest. After many more shares have been bought than actually exist, the final step in the process is reached. That many more shares might be sold short than exist was made possible by relending under cover shares which had just been delivered. For example, A sells 100 shares short to B. B's brokers loan B's stock on the exchange to A, who then delivers it back to B's brokers. Next, C sells short, and B's broker buys for B's account. Now, C borrows the same 100 shares from B which A had borrowed from B and then delivered back to B. Thus, the same 100 shares serve as delivery for short sales amounting to 200 shares. This process can be repeated as long as there is short selling. Meanwhile, B has accumulated contracts for the delivery of the 200 shares borrowed stock and also holds the 100 shares. After he has contracts for much more stock than the floating supply can amount to at the most liberal estimate, or, perhaps, after he has contracts for much more stock than exists, he refuses to lend further and calls on the shorts for the stock he lent them. When the shorts order their brokers to buy in the market, no stock is offered. In an effort to buy stock the brokers of the shorts bid the price up and up. B has all the stock and holds it for the highest price he can get. Nothing is left for the shorts to do except to break their contracts or to attempt some kind of compromise with the parties who hold the contracts and the stock.

The history of the New York Stock Exchange records two notable corners preceding the panic of 1837. These early corners were in their essentials like the more recent ones. In 1835 a pool was formed to put up the stock of the Morris Canal Company. As the stock advanced, a large short interest developed. The pool bought the stock considerably below par. The shorts settled anywhere up to 150. The second corner, engineered in 1835, ran up the stock of the Harlem Railway. On the basis of 7,000 shares

issued, the shorts sold to the pool over 60,000 shares. The shorts settled at a big profit to the pool.[8]

Commodore Vanderbilt in the sixties engineered three corners. All were carried through in defense of his property against the attacks of unprincipled speculators. The Commodore had been operating steamboats the most of his life and made a lot of money. In 1863 he bought some stock of Harlem Railway around 8 and 9 as an investment. He became interested in the enterprise and began to develop the property. It soon climbed to 30 and then to 50. Traders began to suspect manipulation. In April, 1863, an ordinance granting Vanderbilt the right to build a street-car line the length of Broadway was passed by the New York City council. Since such a grant meant much to the Harlem Railway, the stock soon advanced to 75. The council now conspired to make large profits by selling Harlem short and then repealing the ordinance passed in April. The council members tipped off their friends and total short sales amounted to much over the 110,000 shares of Harlem. The great bear operator, Daniel Drew, had a share in the attempted raid. The ordinance was repealed on schedule, but instead of a decline in price of 20 to 30 points, as expected, the decline amounted to but 3 points. Vanderbilt had learned of the conspiracy, had bought up all the stock, and when the members of the council and their friends began to get scared because the price did not decline many points and began to cover, they had to buy from the Commodore. The price was bid up rapidly, and the council settled at 179, while the Commodore profited to the amount of five millions or more.

The next year, 1864, Vanderbilt wanted to consolidate the Harlem Railway and the Hudson River Railroad, the control of which he had obtained by purchasing its stock. He

[8] Pratt, Sereno S., *The Work of Wall Street,* p. 378. See also Clews, Henry, *Twenty-eight Years in Wall Street,* p. 104. Clews notes that the bears in the Morris Canal corner appealed to the Board of Brokers, which ruled that the pool was guilty of conspiracy and relieved the shorts from fulfilling their contracts to deliver the stock.

and his lobbyist in Albany had won the governor and a safe majority of the state legislature to his side, and a bill was to be passed granting the right to consolidate. While the Commodore was in New York buying stock in expectation of a rise after the passage of the bill, his lobbyist in Albany learned of a conspiracy by the legislature to sell Harlem short and defeat the bill, and so informed his principal. The stock under Vanderbilt's guidance had advanced from 75 to 150. Thousands of shares more than existed were sold short by the members of the legislature and their friends. Vanderbilt, knowing exactly what was going on, rallied several friends to his aid, and all the stock offered was bought. The first Harlem corner was repeated. The solons of the great state of New York settled at 285 per share.

The third Vanderbilt corner took place two years later in the stock of the Hudson Railroad. Vanderbilt was out of New York on a vacation when bear cliques began to hammer the stock of the Hudson Railroad down. Its sponsor being away, the price declined rapidly. A messenger brought the news to the Commodore, who immediately returned to New York and ordered his brokers to buy all the stock offered. To give the bear clique the impression that the takers of the stock were financially weak and had to have help to carry so much stock, Vanderbilt, through his brokers, approached the leading bear houses requesting them to take the stock and pay cash. The broker's principal, however, was to have the right to buy the stock back at his own option. The bears immediately took the bait, bought the stock, and threw it on the market. The proper impression was created, and more selling followed. All the stock was at once bought by the great manager of the corner. When the bears began to deliver, the stock went from 112 to 180 in a few days. While the bears were buying cover, Vanderbilt was selling stock quietly at 140 and thus avoiding the difficult situation of being left with a large amount of stock on his hands and no market for it.

Less ingenious managers of corners have not profited by the foresight of Vanderbilt and have found themselves driven to bankruptcy with thousands of shares of stock in their possession but without a market for the stock. In the decade following the Civil War, scarcely a year passed without one or more corners on the Exchange. The Prairie du Chien corner took place in 1865; besides the Hudson Railroad corner, there was one in Reading, one in Rock Island, one in Cleveland and Pittsburgh, one in Northwestern preferred, one in Michigan Southern, one in Cumberland Coal, and one in Northwestern common in 1866; in 1867 a pool in Erie was broken by the sale of large blocks of stock by English holders; in 1868 a corner in Rock Island was smashed when the company sold 49,000 shares of its stock on the market, but a corner in Erie succeeded; in 1869, Black Friday, with its corner in gold manipulated by James Fisk and Jay Gould, is notable; in 1871, a pool cornered Rock Island, the price rising from 114 to 130 and, after liquidation, quickly dropping to 110; in 1872, a corner in Erie, and in Northwestern; in 1873, a corner in Northwestern; in 1881, a corner in Hannibal and St. Joseph Railroad by John R. Duff; in 1884, a corner in Delaware, Lackawanna & Western by S. V. White; in 1901, a corner in Norther Pacific; in 1920, a corner in Stutz Motors, and in 1923, a corner in Piggly Wiggly Stores, Incorporated, Class A common.

Allan A. Ryan, a large holder of Stutz Motors stock, decided to punish bear cliques who were making severe attacks on Stutz Motors. He and his associates bought stock to the amount of 110,000 shares with only 100,000 shares outstanding. Trading in the stock was discontinued, and when it was evident that a corner existed, the stock was taken off the stock list. It is said that stock sold over-the-counter up to $700 per share. Later the stock sold as low as $20 per share. Ryan failed, and several large banks which had taken the stock as collateral on loans lost heavily. The collateral was sold at auction at from $20 to $25.

The corner in Piggly Wiggly Stores, Incorporated, was managed by one of the leading operators in Wall Street. Like the Harlem and the Stutz corners, it was carried through to punish the forces that seemed to be wilfully destroying the value of the stock. The story runs that several stores with names quite similar to the Piggly Wiggly stores but with no connection whatever, had gone into bankruptcy and the professionals in Wall Street, making capital out of the expected failure of the public to distinguish between the different groups of stores, began to hammer down the Piggly Wiggly stock. Before the selling began, the price was above 50. From this figure it was forced down below 40. Clarence Saunders, president of Piggly Wiggly Stores, Incorporated, and his associates began to buy stock at 39 and by the end of the year the price had advanced 20 points to 59. Saunders had come to New York threatening that he would beat the professionals at their own game. Some time after the opening of the new year, 1924, the stock was selling at 60. At the same time the Piggly Wiggly Investment Company was selling Piggly Wiggly Stores stock at 55 in the South and Middle West, the stock to be delivered at a later date. On March 2 the price rose to 75, but the investment company's salesmen were still selling at 55. The plan for the sale of the stock not to be delivered until a later date and at a price much below the market, aimed to provide a market that would take the stock off Saunders' hands at a good price after the corner had been sprung and the stock most probably put off the market. In the Hudson Railroad corner Vanderbilt unloaded a large amount of his stock privately at a relatively low figure while the bears were paying him a high price to settle. He thus avoided carrying stock which had no market.

In January, certain Chicago interests charged that there was a corner in Piggly Wiggly, but this was denied by the authorities of the New York Exchange. The advance in the stock went steadily forward until on Monday, March

12, 1923, the price reached its highest point at 79¼, previous to the corner. The air was full of rumors and the Committee on Business Conduct of the Exchange sent out a questionnaire to all members, requesting them to answer the following questions as to Piggly Wiggly Stores, Incorporated, Class A common:

How many shares long and for whom?
How many shares short and for whom?
How many shares borrowed and for whom?
How many shares loaned and for whom?

The answers to these questions, it was hoped, would reveal the situation as to a possible corner.

In a telegram on March 13, the day after the highest price for the stock was reached, Saunders assured the authorities of the Exchange that a free market was being maintained and that the stock was being loaned in any amount without charging a premium.

The answers to the questionnaire accounted for only 39,802 out of 200,000 shares outstanding. These figures showed nothing alarming. Saunders claimed he had purchased 198,872 shares when he called the stock. It might be remarked parenthetically, at this point, that at least in March, 1923, the questionnaire method of control of members was a failure.

This questionnaire was followed by heavy selling and on March 16 the stock closed at 65¼. A writer for the financial page of the *New York Times* of March 17, in reviewing the price movements of the market, said this decline should dispel all thought of a corner. It took 10 trading days from March 1 to 15 with a volume averaging about 2,000 shares per day to advance the price from 71½ to 79¼. On March 16 sales of 5,400 put the price down 11 points. But buying of 3,700 shares on Saturday the 17th put the price up to 70 from 65¼ and on Monday following, purchase of only 600 shares put the stock to 72. On Tuesday, March 20, volume went to 23,600 and the price soared 52 points to 124 per share. Saunders had instructed his brokers to de-

liver to the National Bank of Commerce all the stock which they held long for his account. The brokers proceeded to call in the stock loans. Rumors that the authorities would suspend delivery quieted the panic and the day closed with the price at 82. It is said that one-third of the traders on the floor had assembled at the Piggly Wiggly post at the news that the stock had been called. At the close, the stock loaned flat. It was not until after closing that trading in the stock was forbidden by the Governing Committee. The Executive Committee of the Stock Clearing Corporation adopted a resolution suspending delivery on March 21. The Governing Committee on March 22 struck the stock from the stock list and the Executive Committee of the Stock Clearing Corporation required that all deliveries should be made by 2:15 o'clock on Monday, March 26.

Since the stock was no longer traded in on the floor, the over-the-counter market was resorted to, where it was reported to have sold at 145 on Wednesday, March 21. On Thursday morning, March 22, Saunders announced in the newspapers that he would settle at 150 until 3:00 o'clock p.m., and on Friday morning he sent to the Exchange and brokers' houses telegrams saying he would settle at 100 until 3:00 p.m. On Saturday the newspapers announced Saunders' refusal to furnish the short interest with stock at any price.[9]

How the whole affair was finally settled is difficult to say. Saunders, in an attempt to save himself and the Piggly Wiggly Stores, Incorporated, sold stores in Chicago, Kansas City, St. Louis, and other cities. He also tried to sell stock in Memphis, the headquarters of the company, and other cities, but people were cautious. Saunders resigned from the presidency of the company. The *Wall Street Journal* of August 14, 1925, notes that "Cla-le-Clare, $1,000,000 palace of Clarence Saunders at Memphis, Tennessee, must be sold by October 3 or it will be auctioned, according to

[9] See, *Report of the President, the New York Stock Exchange,* 1921-1923, and *New York Times,* issues for March, 1923.

a court ruling. The estate is now under jurisdiction of trustees in bankruptcy."

Henry Clews said in his *Twenty-eight Years in Wall Street,* "Another curious thing about 'corners' is that the people who organize and manipulate them generally get most hurt in the enterprise." This statement seems as true now as it was in 1887 when Clews wrote. The Exchange is very severe with the operator who corners the market. This action is to be highly commended. It would seem, however, that when it punishes a man severely for defending his own property against marauders, it should be equally severe with marauders and prevent their attacks upon property. Adequate and well-balanced control by the authorities of the Exchange, though in process, is a long way from reasonable perfection.

SPONSORED STOCKS

In every movement in the prices of stocks, there are always certain stocks that assume leadership. United States Steel, Union Pacific, Reading, the motors, or the rubbers, or some other stock or group of stocks, are the leaders, and the stock market news, talk, and enthusiasm centers in them and spreads out to other stocks. These leaders move first, are the most active, and get the most advertising. The leaders during the summer of 1925 were Mack Trucks, American Can, and General Electric. The rails for several months lacked leadership. Several minor rails made good gains, but none of the big powerful railroads forged ahead. Again, certain very good stocks with large earnings did not move ahead as might have been expected. The reason given by financial writers was that no one was sponsoring them. To be a leader on the constructive side of the market, a corporation must be a large and powerful concern with excellent earnings and outlook for continued prosperity. The general market trend must be upward, and the stock of the corporation must be properly managed. Some clique or

pool, a powerful banking interest or powerful group of inside interests, must keep the stock well advertised. Any turn in events at home and abroad that favorably affect the corporation must be brought to the attention of the public, the officers must make occasional statements as to the earnings and outlook of the business, the stock must be kept active, no large declines dare be admitted, strong support must be given on occasion of bad news, and the stock must be kept advancing.

In such leadership there is no purpose to create an artificial value for the stock, but, on the other hand, the aim is to make the market properly appreciate the value that is really there or in prospect. To this end every favorable factor must be brought before the public, and the market action must be kept consistent with the publicity. Often price quotations are the best publicity. The market is the final test, and unless its activity confirms the news, the news is soon discounted.

Proper sponsorship of his product is exactly what the conservative advertiser attempts to secure through salesmanship and publicity. He aims to make great numbers of people appreciate the really good points of his product—all of such good points, rather than but a few. Whenever a new use is found for his product, or a new feature is devised, or a new market outlet is created, or a higher level of consumers is reached, or a larger volume of sales is attained, the conservative advertiser, to say nothing of the more radical type, sees to it that the general public is properly apprised of these facts. All such factors add to the value of the product, and the public must be made to realize it to the fullest extent.

Now, this is exactly what market leadership involves. From the business point of view, the nature of the one is the same as that of the other. Ethically, the one is no worse than the other. Manipulation in the sense of a creation of artificial values must not be confused with a *bona-fide* sponsorship of a stock to bring its merits to the attention of the

market. On the other hand, it is very difficult to determine where honestly conceived attempts at "making a market" end, and manipulation, in the sense of a planned creation of exaggerated values, begins. Only the latter is to be condemned, and the New York Stock Exchange, the states, and business men generally, should put forth special efforts to stop it.

EFFECT OF MANIPULATION ON PRICES

That manipulation does have a very definite effect on the prices of individual stocks at times, cannot be doubted. Certain stocks may be boosted to entirely unwarranted figures by able management. Such manipulation may last for only a few days, a month, six months, a year, and occasionally throughout an entire cycle. On the other hand, it is very difficult to manipulate the stocks of great corporations with their shares distributed to thousands upon thousands of investors, for any but temporary periods and at relatively small variations of the price from the general market level. Here most manipulation simply effects a rise or a decline in the price of a given stock in advance of the time when the rise or decline would come anyway in the regular course of the market.

As to the whole market, for the long-time trends no one now deludes himself into thinking that there is any power great enough to manipulate it. Basically, the exaggerations at the tops and bottoms are due to a badly mistaken psychology on the part of the public.

The conclusion to be drawn from this study of manipulation is that the trader or investor who operates on the basis of the long or major swings of the market, who properly distributes his funds among different stocks, and who sticks as closely to fundamental values as a careful study of the facts reasonably indicates, need worry very little about the "nefarious" activities of Wall Street and the big, wicked "interests."

XXIII

STOCK PRICE AVERAGES

The Dow, Jones averages. The *New York Times* averages. The *New York Herald-Tribune* averages. The stock price index of the Standard Statistics Company. Irving Fisher stock indexes. The best index. Conclusions.

The value of an index which sums up in numerical form a group of factors changing from time to time through a series of weeks, months, and years has become so evident that statisticians have, of recent years, been busy attempting to construct indexes that shall accurately represent changes in almost all types of fundamental factors in our economic life. Professor Irving Fisher found over 560 index numbers "published currently in the world."[1]

In the field of stock prices there are two types of indexes: (1) averages, and (2) indexes proper. The Dow, Jones averages, the *New York Times* averages, and the *New York Herald-Tribune* averages cannot be called indexes. They are merely averages of stock prices stated in terms of dollars and, therefore, are rightly named.

On the other hand, the indexes published by the Standard Statistics Company and Professor Irving Fisher are abstract numbers properly weighted and are price indexes as distinguished from averages of prices.

Each of these averages and indexes will be taken up in this chapter, not with a view to specifically criticize them nor to construct a new index, but simply to explain the different tools readily available for use by the investor and trader. Some attention is given to their relative merits to indicate high and low points in the market.

[1] Fisher, Irving, "New Index Numbers of Stock Sales and Prices," *New York Times Annalist*, January 3, 1926.

THE DOW, JONES AVERAGES

Brief History. The *Wall Street Journal,* published by Dow, Jones & Company, made its first appearance to the financial public on July 8, 1889. Before this time Dow, Jones & Company had been issuing a daily letter which had a large circulation in the financial district of New York and among men interested in business and finance in other cities. At first this letter consisted of but two pages, but later developed to such size that a full-fledged daily financial newspaper seemed warranted. The Dow, Jones averages were first published in the daily letter in 1884 and consisted of a simple arithmetic average of the closing prices of 11 active representative stocks, 9 of which were rails. The original 11 stocks were as follows:

Chicago & Northwestern
Chicago, Milwaukee & St. Paul
Delaware, Lack. & Western
Lake Shore
Louisville & Nashville
Missouri Pacific
New York Central
Northern Pacific pfd.
Pacific Mail
Union Pacific
Western Union

Soon the prominence of the Delaware & Hudson warranted its addition to the list, making a total of 12 stocks. The computation of the average then consisted of finding daily the sum of the closing prices for the day of the 12 stocks named and dividing the total by 12.

As time went on, other stocks became active on the market and it was becoming evident that a more comprehensive list of stocks was needed to properly represent the market as a whole. Acting on this idea the *Wall Street Journal* extended the list to include eight additional stocks, all rails. The eight stocks were as follows:

Canadian Pacific
Erie
Jersey Central
Missouri, Kansas & Texas
Omaha
Oregon Transcontinental
Richmond Terminal
Texas & Pacific

The latter part of the eighties and the early nineties saw

the country engaging in great prosperity which was followed by the panic of 1893. During this period there were many developments in the field of the railroads and, therefore, to keep the list of 20 stocks representative of the whole market, changes had to be made from time to time. Meanwhile the industrial field was expanding. The early nineties were active times for the captains of industry. The tobacco trust, steel trust, whisky trust, sugar trust, and oil trust were huge industrial projects and promised much to the interests concerned. Moreover, their very possibilities, combined with the inevitably large risk and uncertainty involved, created an ideal field for the speculator. The stocks of these companies were being actively traded in, and had to be recognized in an average supposed to be comprehensive. It appeared, however, that the industrials were hardly comparable to the railroads, either as to the stage of development or as to the definite factors that affected their prices. It was therefore, thought best to construct an average for the industrials separate from that of the rails.

On June 5, 1896, there appeared in the *Wall Street Journal* two averages, one based on 20 railroad stocks and the other on 12 active, representative industrial stocks. The average in each case was constructed as before, being a simple arithmetic average of closing prices each day. There was no attempt made at weighting.

The old list of 20 stocks, at the time of the change to two averages, consisted of rails entirely, with the exception of two stocks, Pacific Mail and Western Union, and so was continued for the railroad average until January, 1897, when the list was completely revised. The railroad stocks included in the revised list were as follows:

Atchison
Burlington
C. C. C. & St. Louis
Chesapeake & Ohio
Chicago, Milwaukee & St. P.
Chicago & Northwestern
Erie
Jersey Central
Lake Shore
Louisville & Nashville

Manhattan Elevated	Northern Pacific pfd.
Missouri, Kansas & Texas pfd.	Reading
Missouri Pacific	Rock Island
New York Central	Southern Railway pfd.
New York, Ontario & Western	Wabash pfd.

The 12 industrial stocks which were used beginning June 5, 1896, were as follows:

American Cotton Oil	Laclede Gas
American Sugar	National Lead
American Tobacco	North American
Chicago Gas	Tennessee Coal & Iron
Distillers	U. S. Leather pfd.
General Electric	U. S. Rubber

At the end of 1896, when the railroad list was revised, several changes were also made in the industrial list as follows: Distillers, North American, and U. S. Rubber were dropped and in their place were put the following three other stocks: American Spirits, Pacific Mail, and Standard Rope and Twine.

Between January, 1897, and July, 1926, twenty-eight substitutions were made in the railroad list. Nine railroads of the list of 1897 are on the present line-up. The preferred stock of Northern Pacific and Southern Railway, however, have been dropped in favor of the common stock of these roads. The list as it stands July 1, 1926, is as follows:

Atchison	New York Central
Baltimore & Ohio	New Haven
Canadian Pacific	Norfolk & Western
Chesapeake & Ohio	Northern Pacific
C. M. & St. Paul	Pennsylvania
Delaware & Hudson	Reading
Delaware, Lack. & Western	St. Louis Southwestern
Erie	Southern Pacific
Illinois Central	Southern Railway
Louisville & Nashville	Union Pacific

The railroad average is computed on a 100 par basis, that is, on a percentage basis, and, therefore, since the pars of

Pennsylvania and Reading are 50, the prices of these two stocks are doubled in computing for the day.

In the industrial list 18 substitutions were made from January, 1897, to September, 1916, when the number of stocks included in the average was increased from 12 to 20. In making the substitutions, a stock might be taken off the list and then in a year or more be restored. For example, Southern Pacific common was put on the railroad list in 1900, dropped in 1901, and put back again in 1904. General Electric was put on the industrial list in 1899, dropped in 1901, and replaced in 1907. A number of other stocks, both rails and industrials, have had a similar history.

In September, 1916, a new list consisting of 20 industrials was made up. This list contained only 8 of the stocks of the preceding group. Twelve new stocks were included. The original list of 20 stocks was as follows:

American Beet Sugar	General Electric
American Can	Goodrich
American Car & Foundry	Republic Iron & Steel
American Locomotive	Studebaker
American Smelters	Texas Co.
American Sugar	U. S. Rubber
American Tel. & Tel.	U. S. Steel
Anaconda Copper	Utah Copper
Baldwin Locomotive	Westinghouse Elec. & Mfg.
Central Leather	Western Union

Up to this time industrial averages had been computed on a percentage basis, but on October 13, 1915, a new ruling by the Stock Exchange put all stock transactions on a dollar basis, so that all quotations from that time to the present have been made in terms of dollars per share. The industrial average was, therefore, computed on a dollar basis. For example, Westinghouse Electric & Manufacturing had a par of 50, but the price was not doubled. It was treated exactly the same as the price of United States Steel with 100 par.

The average on a dollar basis for the new list of 20

stocks has been computed back to December 12, 1914, so that since then they should be comparable. Before this time the industrial average was computed from 12 stocks on a percentage basis, but since the stocks used were 100 par value, the average computed on the dollar basis would have resulted in the same figure. Moreover, the 12 stocks were very probably as representative of the market in the earlier period as the 20 stocks in more recent times.

Since 1916 there have been about 15 changes in the 20 industrials used. The reasons for making changes lie in the facts that, (1) shifts in the relative importance of the different stocks occur from time to time and those once representative of the market lose their place; (2) shifts in the importance of different industries make necessary the addition or the subtraction of the shares of one or more companies to give the industry proper weight; (3) changes in price due to stock dividends or due to stocks being split up may be so great that the average would be materially increased or decreased if no changes in the list were made.

Changes in 1924 and 1925 illustrate the reasons for revising the list. No revision had been made from March, 1920, to January, 1924. Meanwhile, Texas Company had reduced its par from 100 to 25 in 1920, American Locomotive Company had split its shares two for one; Studebaker had issued 10 new shares for each 4 old shares in 1923 and, besides, the market for Corn Products, the leathers, and rubbers had materially changed. A revision of the industrial list was needed; more representative stocks had to be substituted for the old shares. Moreover, the averages could not be changed materially. A study of the situation showed that a substitution of American Tobacco, du Pont, Mack Trucks, and Sears Roebuck for Corn Products, Central Leather, Goodrich, and Texas Company would keep the averages about the same and at the same time make them more representative of the market. The change was made January 22, 1924, when the closing prices of the old stocks

averaged 97.41 and on the new list 97.23, both figured on the dollar basis.

On July 20, 1925, General Motors, International Harvester, Kennecott Copper, Texas Company, and U. S. Realty were substituted for Anaconda, Baldwin, Du Pont, Standard Oil of California, and Studebaker. The average of the old stocks was 135.17 and of the new 135. Again, more representative stocks without material change in the average was the object sought.

The last change before July 1, 1926, was made December 7, 1925, when Allied Chemical and Dye and Famous Players were substituted for U. S. Realty and Westinghouse Electric. The old average stood at 155.01, compared with the new at 154.21.

The 20 industrial stocks used July 1, 1926, were as follows:

Allied Chemical	General Motors
American Can	International Harvester
American Car & Foundry	Kennecott Copper
American Locomotive	Mack Trucks
American Smelters	Sears Roebuck
American Sugar	Texas Company
American Tel. & Tel.	U. S. Rubber
American Tobacco	U. S. Steel
Famous Players	Western Union
General Electric	Woolworth

In summary it may be said that in the Dow, Jones stock averages we have two continuous series of figures beginning August 8, 1896, one of which represents in a general way the

TABLE 26

MOVEMENT OF THE RAILROAD AVERAGES

Rallied to Sept. 9, 1902—129.36	Declined to Jan. 21, 1919— 80.88
Declined to Aug. 18, 1903— 88.80	Rallied to May 26, 1919— 91.13
Rallied to Jan. 22, 1906—138.36	Declined to June 20, 1921— 65.52
Declined to Nov. 21, 1907— 81.41	Rallied to Sept. 11, 1922— 93.99
Rallied to Aug. 14, 1909—134.46	Declined to Aug. 4, 1923— 76.78
Declined to July 26, 1910—105.59	Rallied to Mar. 3, 1925—100.96
Rallied to Oct. 5, 1912—124.35	Declined to Mar. 30, 1925— 92.98
Declined to Dec. 24, 1914— 87.40	Rallied to Jan. 7, 1926—113.12
Rallied to Oct. 4, 1916—112.28	Declined to Mar. 30, 1926—102.41
Declined to Dec. 19, 1917— 70.75	Rallied to Sept. 3, 1926—123.33
Rallied to Nov. 9, 1918— 92.91	

TABLE 27

MOVEMENT OF THE INDUSTRIAL AVERAGES

Rallied to June 17, 1901— 78.26	Declined to Aug. 24, 1921— 63.90
Declined to Nov. 9, 1903— 42.15	Rallied to Mar. 20, 1923—105.38
Rallied to Jan. 19, 1906—103.00	Declined to Oct. 27, 1923— 85.76
Declined to Nov. 15, 1907— 53.00	Rallied to Feb. 6, 1924—101.31
Rallied to Nov. 19, 1909—100.53	Declined to May 20, 1924— 88.33
Declined to Sept. 25, 1911— 72.94	Rallied to Mar. 6, 1925—125.68
Rallied to Sept. 30, 1912— 94.15	Declined to Mar. 30, 1925—115.00
Declined to Dec. 24, 1914— 53.17	Rallied to Feb. 11, 1926—162.31
Rallied to Nov. 21, 1916—110.15	Declined to Mar. 30, 1926—135.20
Declined to Dec. 19, 1917— 65.95	Rallied to Aug. 14, 1926—166.64
Rallied to Nov. 3, 1919—119.62	

movements of the industrial stocks, and the other the movements of the railroad stocks.

The Dow, Jones averages are published daily by the *Wall Street Journal* and the leading dailies and weeklies throughout the country. The leading economic and stock-market services use them and make them available to their clients. Any broker or bond man will furnish them to anyone on inquiry. Tables 26 and 27 give the extreme highs and lows over a series of years.

Bond averages. Dow, Jones & Company publishes daily bond averages, as well as stock averages. These averages comprise a daily average (1) of 10 high-grade railroad bonds, (2) of 10 second-grade railroad bonds, (3) of 10 public utilities, (4) of 10 industrial bonds, and (5) a combined average of 40 bonds. The daily figures are simple arithmetic averages of closing prices. The daily averages were begun in January, 1915.

Besides the daily bond averages, Dow, Jones & Company also publishes a monthly index of each of the groups of bonds above named, including an index for the 40 bonds. The method of computing the index is as follows: (1) the daily closing price of each bond of the given group of bonds are averaged for the month; (2) the yield of the bond at the average prices for the month is then ascertained from a bond table; (3) the yields of all the bonds in the group are averaged; and (4) this average yield is then capitalized at 4% by dividing 400 by the average yield.[2] By dividing the yield

[2] Taken from a letter by the office of the *Wall Street Journal.*

into 400, a decrease in yield will indicate an increase in the price of the bonds under consideration; an increase in the yield will cause the index to decline.

The bonds used for computing the bond averages are as follows:

HIGHEST PRICE RAILS

Atchison gen 4s, '95	Norfolk & Western 4s, '96
Baltimore & Ohio 4s, '48	Northern Pacific pr in 4s, '97
C., B., and Q. gen 4s, '58	Pennsylvania cons 4½s, '60
Louisville & Nashville un 4s, '40	Southern Pacific ref 4s, '60
New York Central 3½s, '97	Union Pacific 1st 4s, '47

NEXT PRICE RAILS

Atchison adj 4s, '95	Erie prior lien 4s, '94
Chesapeake and Ohio gen 4½s, '92	Kansas City Southern 5s, '50
Rock Island gen 4s, '88	St. Louis, Iron Mt. & So. 5s, '31
Colorado & Southern ref 4½s, '35	Southern Railway cn 5s, '94
Denver & Rio Grande cons 4s, 36	Virginian Railway 5s, '62

PUBLIC UTILITY BONDS

California Gas & Electric '37	New York Telephone 4½s, '39
Detroit United 4½s, '32	Pacific Tel. & Tel. 5s, '37
Interboro Rapid Transit 5s, '66	Public Ser. Elec. & Gas 5½s, '59
Montana Power 5s, '43	South Bell Telephone 5s, '41
New York Gas 5s, '48	Third Avenue ref 4s, '60

INDUSTRIAL BONDS

American Smelt. & Ref. 5s, '47	International Paper 5s, '47
Armour & Co. 4½s, '39	Liggett & Myers 5s, '51
Bethlehem Steel ref 5s, '42	Republic Iron & Steel 5s, '40
Anaconda 1st 6s, '53	U. S. Steel s f 5s, '63
Indiana Steel 5s, '52	U. S. Rubber ref 5s, '47

The highest point in the bond averages since the beginning of their publication was in 1917. At that time the highest grade rails reached an average price of 96.71; second-grade rails, 92.74; public utilities, 96.61; industrials, 98.95; and the 40 bonds, 96.25.

The next high year was 1922, when the best rails reached an average price of 92.05; the second-grade rails, 88.86; the public utilities, 90.86; the industrial bonds, 96.72; and the 40 bonds, 92.12.

Recent high prices have nearly reached the 1917 high points. To July 15 the highs for 1926 were as follows: the highest grade rails, 92.05; second-grade rails, 95.05; public utilities, 94.90; industrial bonds, 100.10; and the 40 bonds,

95.52. It will be noted that while the combined average has not reached the high point of 1917, the second-grade railroad and the industrial bonds have gone over their 1917 tops.

THE "NEW YORK TIMES" AVERAGES

Stock averages. Beginning in 1911, the *New York Times* has published daily an average of 25 industrial stocks, an average of 25 railroad stocks, and an average of 50 stocks. Each day the average of the high, the low, and the closing prices is given in three separate figures. No weighting is attempted, the simple arithmetic average being employed.

The lists of stocks used by the *New York Times* July 1, 1926, were as follows:

INDUSTRIAL STOCKS

Allied Chemical & Dye
American Can
American Smelting & Refining
American Telephone & Telegraph
Atlantic Refining
Baldwin Locomotive
Brooklyn Edison
California Packing
Coca Cola
Du Pont de Nemours
Famous Players—Lasky
General Electric
General Motors
International Harvester
International Shoe
Laclede Gas
National Lead
Pullman Car
Texas Gulf Sulphur
United Drug
United Fruit
U. S. Cast Iron Pipe
U. S. Steel
Western Union Telegraph
Woolworth Company

RAILROAD STOCKS

Atchison
Baltimore & Ohio
Chesapeake & Ohio
Chicago, Milwaukee & St. Paul
Chicago, Rock I. & Pacific
Chicago & Northwestern
Delaware, Lack. & Western
Erie
Great Northern pfd.
Illinois Central
Lehigh Valley
Louisville & Nashville
Missouri, Kansas & Texas
New York Central
N. Y., New Haven & Hartford
Norfolk & Western
Northern Pacific
Pennsylvania
Pittsburgh & West Virginia
Reading
St. Louis & San Francisco
Southern Pacific
Southern Railway
Texas & Pacific
Union Pacific

Changes in the list of stocks used to compute the *New York Times* averages are made when a stock is merged into

that of another corporation so that it no longer exists, or after a stock dividend which materially changes the value of the stock. A stock dropped from the list is replaced by one of approximately the same value and of similar affiliations.

During the year ending July 1, 1926, no changes were made in the railroad group of 25 stocks, but the changes in the industrial group numbered 11. American Car & Foundry, American Express, American Woolen, Associated Dry Goods, Crucible Steel, Foundation Company, Great Western Sugar, Mack Trucks, Railway Steel Springs, Sears Roebuck, and U. S. Realty and Improvement were replaced by Allied Chemical & Dye, California Packing, Coca Cola, Famous Players, General Motors, International Harvester, International Shoe, Laclede Gas, Texas Gulf Sulphur, U. S. Cast Iron Pipe, and Western Union.

It seems that Dow, Jones & Company is much more conservative in making changes, for only two substitutions were made in its averages in the same period. Whether the conservative attitude or the more radical attitude is best is difficult to say. Advocates of more liberal changes may well claim that a tremendous bull market with frequent mergers and stock dividends, like that of the last year, would surely call for making substitutions in a list of stocks that would be kept representative of the market.

In favor of the more conservative action is the difficulty of keeping the averages comparable when many changes are made. Again, when many changes are made, it is almost inevitable that the principle laid down, that the stocks listed should be representative, must be stretched to the breaking point, so that the new average is not greatly different in amount from the old. Moreover, what stocks are representative and what stocks are not must always be largely a matter of opinion involving individual bias. Some automatic principle for the selection of the stocks which may properly be used should be worked out.

The *New York Times* averages have the advantage over those of Dow, Jones & Company in that 25% more stocks

are used upon which to base the averages. The *Times* average, therefore, should be somewhat more representative of the market as a whole. On the other hand, the Dow, Jones averages have been computed since the beginning of 1897, while the *Times* averages begin with 1911. The Dow, Jones averages, therefore, are available for a much longer period than those of the *Times*.

Bond averages. Besides the stock averages the *New York Times* also publishes daily bond averages. These include an average for 40 domestic bonds and a second average for 10 foreign-government bonds. The figures in both cases are the unweighted arithmetic averages of the daily closing prices of the bonds used.

The composite average of 40 bonds includes not only bonds little affected by the business conditions of the issuing corporation, but also includes those much affected by the prosperity of their company. In other words, the average is made of bonds whose prices may be very differently affected by the fluctuations of finance and business. To be of greatest value to the investor, separate averages of (1) high-grade rails, (2) second-grade rails, (3) industrials, and (4) public utilities should be given, as well as the composite average for the 40 bonds.

THE "NEW YORK HERALD–TRIBUNE" AVERAGES

The stock averages. Many students of the stock market have felt that 20 to 25 stocks can no longer adequately represent the market as a whole. On January 1, 1926, there were 1,027 stock issues listed on the Exchange, as compared with 509 at the beginning of 1915. The maximum number of issues dealt in on one full day in 1925 was 619, as against a maximum of 278 in 1916; and the stocks listed and traded in on the Exchange represent industries of the most varied type, while a decade ago the number of industrial groups was relatively small.

The railroad group is, on the whole, much more homogeneous than the industrial group, and 20 to 25 stocks may be considered quite representative. This will be still more true after proposed mergers and consolidations have been carried to completion. The author of the *New York Herald-Tribune* averages, however, found 30 rails which he considered essential to a representative average.

On the other hand, a study of the characteristics of the prices of groups of stocks of the different industries will show that the trends of their prices do not always run parallel. The same fundamental forces may affect one group favorably and another adversely. Different forces play on different groups and affect them differently. Again, when there are many large companies in an industry, no one stock can adequately represent the whole industry. For example, there are at least 12 steel, 25 oil, 12 railroad equipment, 17 motor, and 13 chain-store stocks of considerable importance listed on the Stock Exchange, but the Dow, Jones list of stocks contains only U. S. Steel to represent the steel industry, Texas Company to represent the oil industry, American Locomotive and American Car & Foundry to represent the railroad equipment group, General Motors and Mack Trucks to represent the motors, and Woolworth to represent the chain stores. Electric Light, Power & Gas are not represented at all. The *New York Times* list of stocks is just as inadequate as that of Dow, Jones & Company, as far as any one industry is concerned. It differs only in that more industries are represented. To give a complete picture of the market, therefore, the averages must be based on the prices of a large number of representative stocks.

To meet this condition, on January 1, 1923, the *New York Herald-Tribune* began publishing daily industrial averages based on the prices of 70 industrial stocks and railroad averages based on the prices of 30 railroad stocks. The 70 industrial stocks selected are shown at the top of the following page.

15 Manufacturing	4 Equipment
10 Oil	5 Store
8 Public utility	10 Motor
6 Steel	5 Food
7 Copper	

The railroad stocks used in the railroad average are divided into 20 dividend-paying and 10 non-dividend-paying rails. Each day is published a separate average for the high, the low, and the closing price of each group of industrials and of each group of rails. Composite averages are also published for the 70 industrials, the 30 rails, and the 100 stocks.

With these averages at hand the investor can trace the movement of any group of stocks in which he is interested, can get its relative position to all other groups, and to the industrial market as a whole. In the case of the rails the dividend-paying rails can be compared with the non-dividend payers, and both can be compared with the market for rails as a whole.

As a final picture of the total market, rails and industrials combined, a composite average of the 100 stocks is computed and published, giving, as in the other cases, a separate average for the high, the low, and the closing prices.

Substitution of stocks. When 20 stocks are used, the declaration of a stock dividend or the splitting of its stock into parts by some company makes a material difference in the final average. This is not true to nearly the same extent when 70 stocks are used. If a stock priced at $240 should be split 4 for 1, the average would fall 9 points in case 20 stocks are used, but only 2.5 points if 70 stocks are employed. In the first case one or more adjustments would be necessary, while in the second the disparity in the average would not be so serious.

It follows from the point just made that the stocks used in the *Herald-Tribune* averages need not be changed as frequently as those of the Dow, Jones and *New York Times* averages, and, therefore, the desirable quality of compara-

bility is maintained to a much higher degree than by the averages using a relatively small number of stocks.

The bond averages. The bond averages of the *Herald-Tribune* includes an average (1) of 10 high-grade rails, (2) of 5 second-grade rails, (3) of 10 industrials, and (4) of 5 public utility bonds. There is also a composite average for the 30 bonds. All these series are unweighted arithmetic averages for (1) the high, (2) the low, and (3) the closing prices of the bonds used.

THE STOCK PRICE INDEX OF THE STANDARD STATISTICS COMPANY

Until now we have been considering stock averages. We shall next consider several stock price indexes. The Dow, Jones stock averages, for example, are merely a series of averages of the prices of stocks. The average rises $5 or falls $5. This means nothing relatively. A rise of 5 points, when the average is $75, cannot be compared with a rise of 5 points when the average is $160. On the other hand, an index gives the average of relative changes in all the stocks used for the index with reference to a base taken as 100.

To illustrate the difference between an average and a simple type of index, take the following example:

Stocks	Base Price	Index	Present Price	Present Index
A	$ 50	100	$ 75	150
B	75	100	100	133.33
C	125	100	150	120
Average	83.33	100	108.33	134.44

The present index, therefore, is 134.44—that is, the base, 100, plus the average of the increases of all the stocks employed in the index. The averages, however, are in terms of dollars and represent an increase from $83.33 to $108.33. This is an increase of $25, or 30%. The really significant

figure is not the increase of one average price in relation to another; the significant figure is the average of the relative increases of all the stocks selected to represent the market.

Another defect of the published averages is the fact that they are not weighted. Without proper weighting an increase in price of $5 in the price of a stock that is relatively inactive on the market will have as much effect on the final average as an equal increase in the value of the shares of a stock that is extremely active. For example, the purchase of 5,000 shares of a given stock runs its price up $5, but it takes the purchase of 100,000 shares to advance the price of another the same number of dollars; then the $5 advance in the inactive stock should not have equal weight with the $5 advance of the very active stock, if the average is to be an index of the advance in price of the market as a whole.

The idea of a weighted index of stock prices was not new, for the construction of such an index had been discussed time and again before the Standard Statistics Company began its index.

The stocks used. In order that the index might truly represent the changes in value of the securities traded in on the stock market, a large number of stocks representing a wide variety of industries were selected. In carrying out this purpose 31 rails and 202 industrials were included in the list. Recently the number of industrials has been reduced to 199. The total number of stocks used at present is, therefore, 230. Twenty-six great industries are represented by groups of stocks. Besides these, about a dozen industries are represented by one or more stocks in the miscellaneous group.

The groups of stocks and the number in each group are as follows:

Rails	31	Farm Mach.	3
Automobile	10	Food	9
Auto Acces.	8	Leather & Shoe	5
Chain Stores	11	Mach. Mfg.	5
Chemical	7	Mail Order	3
Coal	3	Metals	12
Copper	11	Paper	3
Electric Equip.	3	Petroleum	17

Rail equipment	10	Theatre	3
Shipping	3	Tire & Rubber	7
Steel	9	Tobacco	7
Sugar	6	Tract., Gas & Pr.	16
Tel. and Cable	5	Misc. (Indust.)	18
Textile	5		

The wide variety of industries included in the above enumeration and the large number of stocks listed is proof that the market, as a whole, is amply represented.

The indexes are published weekly instead of daily, as is done by Dow, Jones & Company, the *Times,* and the *Herald-Tribune.* An index of each group and a composite index of the 230 stocks are computed on the basis of Saturday's closing prices.[3] These indexes are published exclusively by the Standard Statistics Company. All the other great averages, including Fisher's stock index, are published widely in the daily and weekly press.

The base. The five-year period, 1917-1921, constituting a complete stock-market cycle, is used as the base period for the industrial index. The base figure, which equals 100, is "the mean of the 1917-1921 stock-market cycle." The depressed market in the rails during the period 1917-1921 made it unsuitable as a base. The 10-year period 1913-1922 was, therefore, adopted for the rails. The base figure is obtained by taking the mean of the high and low prices made by the 31 rails within the base period.

The method of weighting. The market closing price of each stock is weighted by the number of shares of the given stock outstanding. For example, in computing the group index for automobile stocks, the price of General Motors is weighted by the number of shares the company has outstanding. Since General Motors has more shares outstanding than any other automobile company, its price is given greater weight than that of the stock of Willys Overland, Studebaker, or any other motor company.

Most authorities agree that the type of average used, the weighting, and the selection of stocks must be decided with

[3] Effective since May 1, 1926.

reference to the purpose of the index. For example, if the trend of prices over a considerable period is to be measured, the weights should be the number of shares traded rather than the total number of shares outstanding. Again, if the effects of the forces that play into the business cycle are to be measured, it may not be necessary to weight the prices of stocks at all.[4]

In the Standard we have scientifically constructed indexes. The industrial index is based on 199 stocks, has a fixed base of comparatively recent date, and is a weighted average. The number and variety of stocks used and the method of weighting by using total shares outstanding make the Standard indexes very adequate representatives of the changes in the total money value of the shares in the hands of the public.

The Standard averages of bond yields. Instead of the usual average of bond prices, the Standard Statistical Company publishes averages of bond yields. There are five averages of bond yields, as follows: (1) of 15 high-grade municipals, (2) of 15 high-grade railroad bonds, (3) of 15 high-grade public utility bonds, (4) of 15 high-grade industrial bonds, and (5) of 60 high-grade bonds. These averages are published for each month since 1900. They are unweighted arithmetic averages of bond yields. Besides these averages of bond yields, an average of the prices of Liberty bonds is computed each month. This average is available for each month since June, 1917.

The Standard preferred stock averages. Three averages of preferred stock prices are published monthly by the Standard Statistics Company, as follows: (1) an average of the prices of 20 high-grade preferred stocks, (2) an average of the prices of 20 unseasoned preferreds, and (3) an average of the prices of 15 non-dividend-paying preferreds.

In computing the first two indexes the price of each preferred stock has been adjusted to a $100 par value and 7%

[4] See Frickey, Edwin, *Review of Economic Statistics*, 1921, Vol. III, pp. 264 ff.

dividend basis. After the adjusted prices of all the stocks in the list of each average have been computed, the simple arithmetic average is struck. This gives the average figure that is comparable to any other figure in the series. The average of the non-dividend-paying preferred stocks is a simple arithmetic average of the closing market prices reduced to $100 par value basis.

Monthly averages of 20 high-grade preferred stocks are published for each month since January, 1910. The other two preferred stock price averages are published for each month since January, 1921.

IRVING FISHER STOCK INDEXES

In his recent book, *The Making of Index Numbers,* Irving Fisher developed an "ideal" formula for making index numbers. This formula is the basis of the method used in making Fisher's index of commodity prices. It is being accepted rather widely by statistical bureaus for making various indexes.

Beginning with January, 1925, Fisher has published an index of industrial stock prices based on the "ideal" formula for each month of the year. Since January 1, 1926, the index has been published each week. The "ideal" index is a weighted geometric mean based on the following formula:[5]

$$P_1 = \sqrt{\frac{\Sigma p_1 q_0}{\Sigma p_0 q_0} \times \frac{\Sigma p_1 q_1}{\Sigma p_0 q_1}}$$

Where P_1 is the index number at a given time, p_1, the price, and q_1, the quantity at the given time, and p_0, the price, and q_0, the quantity at the base period. Beginning with the base period as 100, the index cumulates week by week the action of the market.

The base period. A rough monthly index for January, 1925, was derived. The prices and quantities sold for the first and the last weeks of January were substituted in the

[5] See Fisher, Irving, *The Making of Index Numbers,* pp. 220 ff., 428, 488.

formula and the result was called 100. Beginning with 100 the index for the next month was multiplied by that month's ratio as computed by the use of the formula. Thus, during 1925 each month was the base for the next month. At present, each week becomes the base for the succeeding week. The result is that the weekly figures form a chain of link relatives. This is quite unlike the base of the Standard Statistics Company's index, where each member of the series of figures refers directly back to a fixed base, as, for example, the mean of the prices of selected stocks during 1917-1921 for the industrials and during 1913-1922 for the rails.

The value of a chain of linked relatives lies in its use in making comparisons over short periods, as, for example, this week with last week, or this month with last month. No direct comparisons can be made over long periods of time.[6]

The selection of stocks. In all the averages thus far discussed it is a virtue to make as few changes as possible in the list of stocks employed. Changes are made only because the issuing company goes into bankruptcy, merges with another company, issues a stock dividend, splits its stock into parts, or changes in such a manner that its stock is without question no longer representative of the market. In the construction of Fisher's index none of these unfortunate happenings cause any material trouble. Changes are made freely and constantly from week to week. The principle of the selection of stocks has the advantage of eliminating all personal judgment because it operates automatically in making changes from one stock to another. In brief, the 50 stocks the value of the total sales of which for the week is the highest are selected to make up the list. During 1925 it was found that as few as 27 stocks in one instance constituted over one-half of the business of the Exchange. That is, the value of the shares of these 27 stocks sold was more

[6] See Mitchell, W. C., "A Critique of Index Numbers of the Prices of Stocks," *Journal of Political Economy*, July, 1916, pp. 675 ff., and Persons, W. M., *The Review of Economic Statistics*, 1921, Vol. III, pp. 103 ff.

than half of the total value of all the shares of all the stocks sold on the Exchange during the week studied. In no case were more than 40 stocks required to make up half of the business of the Exchange for the week. "It is found that 50 best-selling stocks usually include about 60% of the total business of the Stock Exchange, so that the index is more fully representative of stock transactions than most commodity indexes are of commodity transactions."[7]

The selection of the 50 "best sellers" is relatively simple. The number of shares sold each week is multiplied by the price of the shares. The same computation is effected in the other stocks sold on the Stock Exchange, and the 50 stocks showing the highest total value are selected.

By this process of selection the list of stocks is always kept abreast of the market. More than half of the value of its transactions is represented in the index, and, on the whole, the most active stocks participate in it.

The method of weighting. The prices of the 50 best-selling stocks are weighted by the number of shares of each stock sold. The weights thus change from week to week, as well as the stocks which constitute the list. This is in sharp contrast to the Standard averages, whose weights remain practically constant and whose stock list changes very seldom.

There is, however, an overlapping of weights or "double" weighting in that the prices of the stocks of the current week are weighted not only by the number of the shares sold but also by the number of shares sold the week before. And, again, the prices of the stocks the preceding week are weighted both by the number of shares sold that week and by the number sold the current week. There is thus a cross-weighting which ties week to week in respect to the weights.

Without the cross-weighting the index might greatly exaggerate the actual increase in prices from week to week. For example, if the average price of this week is $50, and 100

[7] Fisher, Irving, *The Annalist*, January 15, 1926, p. 118.

units are sold, and if the average price was $50 last week, but only 50 units were sold, then to weight this week's price by 100 and last week's price by 50 would indicate a ratio of increase in the average price of two. Fisher's solution of the difficulty is found in his double weighting as described above.

The method of computing the index. Fisher's index is a geometric mean of two ratios. The ratios are found by dividing one aggregate by another. The first ratio is the result of dividing the total dollar value of the shares of the 50 best-selling stocks sold the preceding week computed at the current week's price by the total dollar value of the shares of the 50 best-selling stocks of the preceding week at that week's price.

The second ratio is found by dividing the total dollar value of the shares sold of the 50 "best sellers" the current week at the current price by the total dollar value of the same shares sold the current week at the preceding week's price. The geometric mean is then found by taking the square root of the product of the two ratios. This mean gives the relative increase or decrease of the price level of the current week over the preceding week. The index number for the current week is found by multiplying the index number of the preceding week by the figure representing the relative change over the week just passed.

The index thus obtained is an abstract number as contrasted with the averages of prices, which are in terms of dollars. Moreover, an increase of a given amount at any point in the series of index numbers represents the same percentage of increase. This is not true of averages.

Besides the index of stock prices Fisher also computes each week an index of volume of shares sold, an index of the value of the shares sold, and an index of the rate of return on the 50 best-selling stocks. The number of shares sold on the New York Stock Exchange is published each day, but unless the number of shares is weighted by their

prices no adequate index of the activity of the market can be had. During periods of tremendous volume the market broadens to many low-priced stocks, which are usually quite inactive. Since a share of a low-priced stock counts one, the same as a share of a high-priced stock, mere daily aggregates of shares sold exaggerate the relative amounts of business done on the Exchange. Fisher's volume index is designed to correct this situation and to give a correct picture of the business in the market from week to week.

The index is based on the same ideas and method of computation as his price index. The formula used is as follows:

$$Q_1 = \sqrt{\frac{\Sigma p_0 q_1}{\Sigma p_0 q_0} \times \frac{\Sigma p_1 q_1}{\Sigma p_1 q_0}}$$

where Q_1 is the index of volume and all the other symbols have the same significance as in the stock price index.

The index number of value of shares sold is the product of the price index by the volume index. For example, the first week of July, 1926, the price index number was 148.3, the value index number 81.1 and their product 120.3, the index number of the value of shares sold.

The index of the "rate of return is the quotient of the cash dividend per annum, as shown by the latest reports, to the values of the stocks yielding them weighted according to sales."[8]

THE BEST INDEX

Three averages and two indexes have been described in this chapter. The question at once arises, which is the best? The answer must depend on who is to use the index, and for what purpose. There are, to be sure, two views as to the best index. One view holds that a good index is a good index no matter who uses it or for what purpose; the other holds that an index is good or bad only with reference to its use, that is, a very good index for one use might be a very misleading one for another use.

[8] Fisher, Irving, "New Index Numbers of Stock Sales and Prices," *New York Times Annalist,* January 15, 1926, pp. 117, 118.

Table 28

Comparison of the Dates of the Annual High Points of the Industrial Averages

Averages	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915
Dow, Jones.....	Feb. 11	Nov. 6	Dec. 31	Mar. 20	Oct. 14	Dec. 15	Jan. 3	Nov. 3	Oct. 18	Jan. 3	Nov. 21	Dec. 27
Times.....	Mar. 3	Nov. 5	Dec. 31	Mar. 6	Oct. 18	May 6	Apr. 8	Nov. 5	Oct. 16	Jan. 4	Nov. 20	Oct. 28
Standard.....	Feb. 2nd wk.	Nov. 9	Dec. 29	Mar. 21	Oct. 11	Dec. 14	Jan. 7	Nov. 5	Nov. 13			
Herald-Tribune..	Feb. 11	Nov. 6	Dec. 29									
Fisher.....	Feb. 1st wk.	Feb.										

Comparison of the Dates of the Annual Low Points of the Industrial Averages

Averages	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915
Dow, Jones.....	Mar. 30	Mar. 3	May 20	Oct. 27	Jan. 10	Aug. 24	Dec. 21	Feb. 18	Jan. 15	Dec. 19	Apr. 22	Feb. 24
Times.....	Mar. 30	Mar. 3	Apr. 22	Oct. 27	Jan. 10	Aug. 25	Dec. 22	Feb. 10	Jan. 15	Dec. 20	July 15	Feb. 24
Standard.....	Mar. 30	Mar. 30	Apr. 21	July 3	Jan. 11	Aug. 24	Dec. 22	Jan. 22	Mar. 27			
Herald-Tribune..	Mar. 30	Mar. 30	May 20									
Fisher.....	Apr. 3rd wk.	Apr.										

Several groups of people may be interested in a stock price index as follows:

1. Students of the business cycle, who are interested in the movement of the stock market as an indicator of the movement of fundamental cyclical forces;
2. The long-swing trader or investor;
3. The trader for the minor swings;
4. The tape reader.

Each of these groups has its own peculiar interests in the market, and wants an index that meets its needs. A comparison of the averages and indexes may give a partial answer to the question raised above. Four types of comparison are presented in the following discussion: (1) the dates of the high and low points of each year and of the cyclical movements; (2) the percentages of advances or declines that occur each year and in each cycle; (3) the day-to-day movement; and (4) the effect of leaders of the market on the averages and index numbers.

1. A comparison of the dates of the high and low points of the various averages and indexes of industrial stocks is given in Table 28.

Table 29 gives a summary of the number of times the dates of the annual high and low points of the different averages fall in the same month, within seven days, within three days, and on the same day.

Table 29 makes it evident that there is a very high degree of correspondence in the dates of the high and low points of the different stock indexes. In 12 years 8 of the yearly industrial high points and 10 of the low points came in the same months in both the Dow, Jones and *Times* averages. Seven highs of the Dow, Jones averages came within 7 days from like points in the *Times* averages. The low points of these two averages compare still better with 9 out of a possible 12 coming within the 7-day comparison. On the whole the Dow, Jones averages compare more favorably with the *Herald-Tribune* average and the Standard index than does the *Times* average. The high and low points of

TABLE 29

SUMMARY OF COMPARISONS OF ANNUAL HIGH AND LOW POINTS OF INDUSTRIALS

AVERAGES		SAME MONTH	WITHIN 7 DAYS	WITHIN 3 DAYS	SAME DAY
Dow, Jones and *Times* 1915-1926*	High	8	7	6	2
12 years	Low	10	9	9	6
Dow, Jones and Standard index	High	8	8	.	.
1918-1926†	Low	5	3	.	.
9 years					
Times and Standard index 1918-					
1926	High	6	5	.	.
9 years	Low	5	4	.	.
Dow, Jones and *Herald-Tribune*					
1924-1926	High	3	3	3	2
3 years	Low	3	2	2	2
Times and *Herald-Tribune* 1924-	High	2	2	2	1
1926	Low	2	1	1	1
3 years					
Standard and *Herald-Tribune*	High	3	3	.	.
1924-1926	Low	3	3	.	.
3 years					

*To July 1, 1926.
†The Standard index is published weekly only.

Fisher's index for 1925 is not comparable with the other series because Fisher's figures represent monthly averages while the others are for the day or the week. In the early part of 1926 Fisher's index was high the first week in February, as compared to February 11 of the Dow, Jones and *Herald-Tribune* averages, March 3 of the *Times* average, and the second week of February according to the Standard index.

The dates of the cyclical high and low points of the industrials according to the different indexes are in Table 30.

The almost uniform correspondence of the dates of the longer-swing high and low points of the industrial averages and indexes is strikingly illustrated in the table of comparisons on page 479. It will be noted that the Fisher index has the high of February, 1926, in the first week while all the other series have it later. The low of Fisher, April, third week, 1926, comes three weeks later than that of the

TABLE 30

DATES OF CYCLICAL HIGH AND LOW POINTS OF INDUSTRIALS

	DOW, JONES	*Times*	*Herald-Tribune*	STANDARD WEEK ENDING	FISHER
Rose to	11-21-1916	11-20-1916			
Declined to	12-19-1917	12-20-1917			
Rose to	10-18-1918	10-16-1918		11-13-1918	
Declined to	2-18-1919	2-10-1919		1-22-1919	
Rose to	11- 3-1919	11- 5-1919		11- 5-1919	
Declined to	12-21-1920	12-22-1920		12-22-1920	
Rose to	5- 5-1921	5- 6-1921		5- 4-1921	
Declined to	8-24-1921	8-25-1921		8-24-1921	
Rose to	3-20-1923	3- 6-1923		3-21-1923	
Declined to	10-27-1923	10-27-1923		7- 3-1923	
Rose to	2- 6-1924	2- 6-1924		2- 4-1924	
Declined to	5-20-1924	4-22-1924	5-20-1924	5-12 and 4-21-1924	
Rose to	3- 6-1925	2-10-1925	3- 6-1925	2- 9-1925	Feb. 1925*
Declined to	3-30-1925	3-30-1925	3-30-1925	3-30-1925	Apr. 1925*
Rose to	2-11-1926	3- 3-1926	2-11-1926	Feb. 2nd Wk. 1926	Feb. 1st Wk. 1926
Declined to	3-30-1926	3-30-1926	3-30-1926	Mar. 5th Wk. 1926	Apr. 3rd Wk. 1926

*Average for the month.

other indexes. It is also noteworthy that the 70 stock price average of the *Herald-Tribune* corresponds to the day in the last five turning points in the market with the Dow, Jones averages based on 20 stocks.

2. *The percentages of rise and decline of the longer swings.* On the following page is given a table of the percentages of rise and decline of the major swings in the prices of stocks as indicated by the different indexes, 1916-1926.

The figures in Table 31 seem to indicate that the *Times* averages fluctuate more than any of the averages studied. Since March, 1923, however, the Dow, Jones figures have fluctuated more than the *Times* averages. As might be expected, the *Herald-Tribune* average varied more than the Standard index during the period since May, 1924, and both varied less than either the Dow, Jones or the *Times* figures.

3. *Comparison of day-to-day fluctuations.* The trader who bases his work on the day-to-day fluctuations wants a

TABLE 31

RELATIVE LONG-SWING CHANGES IN PRICES OF STOCKS, 1916-1926

DATES		DOW, JONES (Percentage)	*Times* (Percentage)	STANDARD (Percentage)	*Herald-Tribune* (Percentage)	FISHER (Percentage)
Rose to	Nov., 1916	29.8	37.7			
Declined to	Dec., 1917	40.1	47.3			
Rose to	Oct., 1918	21.4	28.2	Jan.		
Declined to	Feb., 1919	11.2	12.1	4.14		
Rose to	Nov., 1919	51.2	71.8	38.0		
Declined to	Dec., 1920	44.1	44.5	40.2		
Rose to	May, 1921	19.9	18.4	16.7		
Declined to	Aug., 1921	20.1	26.9	17.0		
Rose to	Mar., 1923	45.9	78.8	61.3		
Declined to	Oct., 1923	19.4	19.9	18.4		
Rose to	Feb., 1924	18.1	16.7	17.5		
Declined to	May, 1924	12.8	April 10.4	9.41		
Rose to	Mar., 1925	42.5	36.8	30.6	38.2	
Declined to	Mar., 1925	8.5	8.0	7.96	6.35	
Rose to	Feb., 1926	41.1	41.5	31.2	34.6	22.2
Declined to	Mar., 1926	16.7	24.8	13.3	13.3	21.8
Average of advances 1916-26		36.1	41.2	...	...	...
Average of declines 1916-26		20.4	24.2	...	...	...
Average advances Feb. 1919 to July 1, 1926		39.6	44.0	32.6	...	...
Average declines Oct. 1918 to July 1, 1926		19.0	20.9	17.7	...	...
Average advances since Aug. 1921		41.7	43.5	35.2	36.4*	..
Average declines since Aug. 1921		14.4	15.8	12.3	11.9*	...

*Since May, 1924.

sensitive measure of the market. A comparison of the daily fluctuations of the *Times* and *Herald-Tribune* averages is given in Tables 32 and 33 with the aim of ascertaining which fluctuates most easily. The two periods selected for study cover the spring advances and declines of 1925 and 1926. The first period covers the 88 trading days from February 14 to May 31, 1925; the second, 74 trading days from February 1 to April 30, 1926. Both periods are characterized by wide fluctuations in the market.

In both periods above given the average daily fluctuation for the period is greater for the *Times* than for the

TABLE 32

AVERAGE PERCENTAGES OF DAILY ADVANCES AND DECLINES IN THE TIMES AND THE HERALD-TRIBUNE AVERAGES FEBRUARY 14 TO MAY 31, 1925

	All Days	February	March	April	May
Advances					
Times.....	.59	.68	.76	.52	.96
H.-Tribune...	.52	.62	.65	.57	.40
Declines					
Times.....	.61	.73	.99	.37	.88
H.-Tribune...	.62	.96	.88	.40	.22

Herald-Tribune averages, except the declines in the first period, which are greater than those of the *Times* averages. May, 1925, shows a much greater stability on the part of the *Herald-Tribune* averages than that of the *Times* averages. This difference was probably due to the rapid advance in several leaders at that time. In April, 1925, however, the daily relative fluctuations were greater on the average in the case of the *Herald-Tribune* averages than in that of the *Times* averages.

On the whole the two periods studied indicate that the *Herald-Tribune* averages are relatively stable as compared with the *Times* averages. There are, however, sufficient exceptions to this statement to detract in a considerable measure from any claim of relative stability that may have

TABLE 33

AVERAGE PERCENTAGES OF DAILY ADVANCES AND DECLINES IN THE TIMES AND THE HERALD-TRIBUNE AVERAGES FEBRUARY 1 TO APRIL 30, 1926

	All Days	February	March	April
Advances				
Times	.76	.46	1.15	.73
H.-Tribune	.671	.36	1.05	.66
Declines				
Times	.76	.77	1.29	.63
H.-Tribune	.63	.55	.86	.39

been made by the advocates of the use of many stocks in the construction of an average.

4. *The effect of one or two leaders on the averages.* It is often claimed that averages using only 20 or 25 stocks represent the activity in a few leaders rather than the market as a whole. From about May 1, 1926, to July 15 and later, General Motors and U. S. Steel were the leaders in the market, advancing rapidly in price. The effect of these leaders on the Dow, Jones averages during the period from May 1 to July 15 is shown in Table 34. If there is any great determining effect in a few leaders this period should show such an effect because the two stocks above named were conspicuous for their advance in price.

TABLE 34

THE EFFECT ON THE AVERAGES OF LARGE ADVANCES BY A FEW STOCKS MAY 1, 1926, TO JULY 15, 1926

	Stocks	Average May 1, 1926	Average July 15, 1926	Per Cent Increase
20	stocks of the Dow, Jones averages	143.40	155.84	8.70
18	stocks (Gen. Motors and U. S. Steel not included)	145.10	156.52	7.87
17	stocks (Gen. Elect., Gen Motors, and U. S. Steel not included)	134.70	145.02	7.68
25	stocks of the *Times* averages	149.12	163.05	9.38
23	stocks (Gen. Motors and U. S. Steel not included)	150.95	164.21	8.76
22	stocks (Gen. Motors Gen. Elect., and U. S. Steel not included	143.18	155.40	8.56
50	Most active of stocks, Fisher index	130.03	148.60	14.28
70	stocks of the *Herald-Tribune* averages	114.91	121.85	6.04
199	stocks of the Standard index	143.3	153.90 July 17,	7.40

The above data show that if General Motors and U. S. Steel had been eliminated from the Dow, Jones averages, the increase from May 1 to July 15 would have been .83% less than when the full 20 stocks were used; the elimination of General Motors, U. S. Steel, and General Electric makes a difference of only 1%. The *Times* averages showed even

a smaller effect because of the advance in a few leaders.[9] The feverish activity of a few leaders thus changes the averages but slightly from the trend they would have taken without the abnormal advances.

Fisher's index seems to exaggerate the effect of the leaders when large amounts of their stocks are dealt in. General Motors and U. S. Steel were very heavily bought during the period under discussion. A stock with a relatively small number of shares like Baldwin Locomotive might make as great an advance as U. S. Steel, for example, but with fewer shares of stock sold. If this had been the case the Fisher index would probably have shown a relative advance more nearly equal to that of the Dow, Jones averages. The objection to the Dow, Jones and *Times* averages may then be more properly made against the Fisher index than against the averages using only a small number of stocks and no weights. The *Herald-Tribune* averages based on 70 stocks advanced somewhat over 6% as compared to the advance of 8.70% in the Dow, Jones and 9.38% in the *Times* averages. The stabilizing effect of a large number of stocks on an unweighted average, when the market is dominated by a few leaders, is here very evident. The reason lies in the fact that the stocks employed in the Dow, Jones and *Times* averages are all leaders of the great industries and actively dealt in, while many much less prominent and less active stocks are included in the averages employing a relatively large number of stocks.

CONCLUSIONS

1. Since the cyclical high and low points of all the averages and indexes come with few exceptions in the same month and, in many cases, on the same day, the long-swing traders can use one series as well as another as an indicator of the turning points.

2. The annual high and low points come, with few ex-

[9] From May 1 to July 15, General Electric rose from 322 to 352; General Motors 133¼ to 158½; U. S. Steel, 122⅞ to 140⅞.

ceptions, in the same month for all the averages and indexes. The trader for the shorter swings will, therefore, find little choice among the series on this point.

3. The percentage of cyclical advances and declines is greatest in the case of the *Times* averages. These averages, therefore, seem the most sensitive of price changes though they may not necessarily represent the market as a whole as accurately as one or more of the other series. It must be said, however, that since October, 1923, the Dow, Jones averages have shown wider relative cyclical fluctuations than the *Times* averages. The Standard index is the least sensitive to changes in the market.

4. The trader or investor who is studying his particular holdings relative to their industry will find both the *Herald-Tribune* and Standard industrial group figures convenient. Neither Dow, Jones, the *Times,* nor Fisher give group figures.

5. The day-to-day trader will find the *Times* averages more sensitive than those of the *Herald-Tribune.* There are exceptions to this statement, however, as, for example, the latter half of February, 1925, when the *Herald-Tribune* averages were more sensitive.

6. Rapid advances in prices by two or three leaders when only 20 to 25 stocks are employed in the construction of an average do not necessarily make a great difference in the trend of the averages.

7. Persons interested in the ebb and flow of stock values as a whole will find the Standard index very valuable. The Dow, Jones, *Times,* and Fisher series will probably be more sensitive as barometers of the prosperity of the great industries of the country than the Standard index.

8. From the point of view of scientific construction the Standard and Fisher indexes are a great advance over the Dow, Jones, *Times,* and *Herald-Tribune* averages. Scientifically constructed indexes, however, like the averages, have their limitations in that they are constructed to accomplish an end. The end which the Standard index ac-

complishes is to furnish an index of the relative changes in the total dollar value of securities in the hands of the public. This index is not necessarily a direct indicator of business.

The Fisher index is a sensitive indicator of the changes in prices of the leading stocks on the market. For comparisons on this point covering short periods it is ideal. Figures for long-time comparisons are not available.

As an indicator of changes in the prosperity of the leading industries of the country, the Fisher index should prove very valuable. It may be added that the results obtained by the use of carefully refined scientific methods do not vary from the more rough and ready indexes and averages as much as one might expect.[10] As we have seen in our discussion, for many practical uses there is not much advantage in the carefully constructed indexes over the averages.

9. When data for a long series of years are desired, the Dow, Jones averages are available to 1896; the *Times* averages to 1911; and the Standard index to 1918. In this respect the Dow, Jones and *Times* averages have the advantage over the other series.

[10] See the *Review of Economic Statistics*, Vol. III, pp. 103-113, and 264 ff.

XXIV

THE DOW THEORY

Three movements of the market. Industrial and rail averages confirm each other in primary movements. The "line" or "sidewise" movement. Summary of the principles of forecasting. Criticisms of the forecasting value of the stock market. Conclusions.

CHARLES A. DOW founded the Dow, Jones & Company news service and later the *Wall Street Journal,* of which he became the first editor. He had his early training as a newspaper reporter on the *Springfield Republican.* His newspaper experience was supplemented by five years' experience as a broker on the floor of the Exchange. As a partner with Robert Goodbody he held a seat on the Exchange and executed the orders of the firm. But newspaper work was more to Dow's liking, and to it he returned the better prepared by his knowledge of financial matters. The theory which Dow worked out in his own mind was never published in a formal treatise or stated in a systematic manner. It can be gathered only from his interpretations of the current market in 1901 and 1902. Dow died in December, 1902.

The theory has been developed, since Dow's death, by different students of the market, among whom none are more prominent than W. P. Hamilton, the editor of the *Wall Street Journal.*[1] These writers do not claim to contribute anything essentially new to the theory. They have corrected the theory where more recent facts have shown it at fault, and have developed implications only mentioned by Dow.

[1] See Hamilton, W. P., *The Stock Market Barometer.* To this book and to editorials in the *Wall Street Journal* the writer is largely indebted for his material on the Dow Theory.

Dow never intended his theory to be used as an instrument which would yield tips on the market. Rather, Dow regarded his theory as a method of interpreting the stock price averages with reference to the fluctuations in business. Dow and his followers consider the stock market a most excellent barometer of business. The forecasting of business movements is then a matter of judging what the market is doing or is going to do. The market is made up of railroad and industrial stocks, but these two classes are not always subject to the same forces. For example, the forces operating on the railroads may be depressing their stocks, while those affecting the industrials may be causes for advancing their prices. As measures of the two types of stocks the Dow, Jones averages are published; one for the rails and one for the industrials. These are the instruments by which the trend of each part of the market is represented. Their proper interpretation gives the business forecasts. Indirectly it may be said the proper interpretation of the averages indicates not only what is happening but often also what is about to happen in the market.

The system of interpretation worked out by Dow and his followers falls into parts as follows: (1) the theory of the three movements of the market; (2) the theory of the corroboration of the averages; (3) the theory of the "line"; and (4) the theory of double tops and bottoms. Each of these factors is taken up in the following discussion.

THREE MOVEMENTS OF THE MARKET

The fundamental idea in the Dow system is that at any given time the market is the composite resultant of three movements, as follows: (1) the major movement, (2) the secondary movement, and (3) momentary or, perhaps, day-to-day fluctuations. These three movements combine to constitute the average price at any moment or at the close of the day as the price appears in the stock price average.

1. *The major movement.* A major movement of the market is one that lasts from nine months to about two years and is either a bull or a bear trend. A bull market is a major movement in which each succeeding high point of the averages is an advance over the preceding high; a bear market is a major movement in which each succeeding low point in the averages is lower than its predecessor. From June, 1900, to August, 1921, Hamilton finds six major bull movements and six major bear movements. The bull markets lasted on the average 25 months and the bear movements, 17 months. He sets down the dates of the turning points in these movements as follows:

1. Advance	June, 1900	to Sept., 1902
2. Decline	Sept., 1902	to Sept., 1903
3. Advance	Sept., 1903	to Jan., 1907
4. Decline	Jan., 1907	to Dec., 1907
5. Advance	Dec., 1907	to Aug., 1909
6. Decline	Aug., 1909	to July, 1910
7. Advance	July 1910	to Oct. 1912
8. Decline	Oct., 1912	to Dec. 1914
9. Advance	Dec., 1914	to Oct., 1916
10. Decline	Oct., 1916	to Dec., 1917
11. Advance	Dec., 1917	to Oct.-Nov., 1919
12. Decline	Nov., 1919	to June-Aug., 1921

January, 1906, may be preferred to January, 1907, as the date at which the bull movement beginning in 1903 ended. There is reason for this preference, because the advance, after the reaction in 1906, stopped 7 points for the industrials and 4½ points for the rails below the high points reached in January, 1906. If this date is taken, then the average length of a bull movement is 23 months and of a bear movement, 19 months.

According to Hamilton's dates the longest bull market lasted 3 years and 4 months and the shortest 15 months. On the bear side the longest and shortest movements were 24 and 11 months, respectively. The bull markets thus average a longer time than the bear movements. This might be expected; it takes longer to build up than to tear down.

While every major movement of the averages has its own time characteristics, yet, from the above figures as to their average length, the probabilities seem to favor approximately 2 years for the completion of a bull market and 18 months for the course of a major bear swing.

It is primarily with reference to the major swings that the Dow theory makes any positive claims. It may or may not be effective in predicting the secondary swings. Its primary use is to interpret the averages as to whether they indicate that a turn up or a turn down has come or is about to come.

2. *The secondary movement.* After every primary movement has gone on for some time, a secondary movement will appear, carrying a bull market down or a bear market up for a short time, perhaps, a week to two months. These reactions and rallies are a regular part of the market program and may be expected to go at least three-eighths of the previous rise or decline of the market. The longer an advance progresses without interruption the more imminent a reaction becomes and, on the other hand, the farther a decline moves the more certain a rally becomes. A recent example of a secondary movement in a bull market was the decline which set in March 6, 1925, and ran until March 30, registering a decline in the industrial averages of 10 points after an advance from 99.18 to 125.68.

3. *The current fluctuations.* The market is at all times in a flux, with rapid but temporary changes ever present. The averages indicate these changes from day to day, but they cannot be predicted nor can they be used to predict anything fundamental in business.

INDUSTRIAL AND RAIL AVERAGES CONFIRM EACH OTHER IN PRIMARY MOVEMENTS

The stock market as a whole and in its large movements represents the working of the law of supply and demand

which involves every fundamental factor in the whole financial and business situation of the country. The averages are an index of the stock market movements, and thus sum up every influence that plays upon the market. There is no use to try to combine the averages with wholesale or retail price indexes, with money rates, or with unfilled orders of the United States Steel Corporation in an attempt to get a barometer of business, for the averages have already taken these fundamentals into account. In other words, the stock market is the best barometer of business and an understanding of its movements is arrived at by an interpretation of the movements of the averages. All the fundamental forces concentrate into a supply of stock or a demand for it on the Exchange. When all the fundamental forces are bullish, both the industrial and the rail averages will advance together; and as long as these forces gain strength, new high points will be made by both averages, each confirming the other. When, however, the situation is divided, so that the forces no longer act as a unit, then a further advance by one average will not be paralleled by a further advance by the other average. The same reasoning is said to hold on the bear side of the market.

Thus in every primary movement the railroad and the industrial averages confirm each other. In a bull market, if the industrial average makes a new high, that is, a high that overtops the preceding high, it is invariable that the railroad average will soon also make a new high. If either average consistently refuses to confirm the other a major movement is probably nearing its end.

Take the bull movements of 1908 to 1909 and 1921 to 1923 as examples.

In 1908 the averages confirm each other except on June 1, when a bear indication seems to have been given. On that date the industrials failed to reach the old high and on June 2 this weakness was confirmed by the rails. The following reaction was of only 20 days' duration and went only 2¾ points in the rails and 4½ points in the industrials,

TABLE 35

THE BULL MOVEMENT OF 1908-1909

THE HIGHS OF THE RAILROADS	THE HIGHS OF THE INDUSTRIALS
Dec. 6, 1907— 90.56	Dec. 6, 1907— 61.77
Jan. 18, 1908— 95.75	Jan. 14, 1908— 65.84
Mar. 27, 1908— 94.40	Mar. 25, 1908— 69.92
May 18, 1908—104.45	May 18, 1908— 75.12
June 2, 1908—102.35	June 1, 1908— 74.38
Aug. 10, 1908—109.12	Aug. 10, 1908— 85.40
Sept. 9, 1908—110.33	Aug. 31, 1908— 84.66
Dec. 12, 1908—118.18	Nov. 13, 1908— 88.38
Jan. 2, 1909—120.93	Dec. 28, 1908— 86.97
Feb. 15, 1909—119.90	Feb. 15, 1909— 86.72
June 5, 1909—128.23	June 5, 1909— 94.46
Aug. 14, 1909—134.46	Aug. 14, 1909— 99.26
Sept. 20, 1909—132.88	Oct. 2, 1909—100.50
Nov. 3, 1909—129.96	Nov. 19, 1909—100.53
Dec. 31, 1909—130.41	Dec. 29, 1909— 99.28
Mar. 8, 1910—125.64	Mar. 8, 1910— 94.56

when both averages again turned up to make new highs. The weakness of the industrials on December 28, 1908, was not seconded by the rails but on February 15, 1909, both averages showed weakness. The lows of both averages, however, on January 30, 1909, were higher than their preceding lows. So long as one average does not fully confirm the other, no new trend is indicated. On September 20, 1909, the railroad average again failed to reach its for-

TABLE 36

THE BULL MOVEMENT OF 1921-1923

THE HIGHS OF THE RAILROADS	THE HIGHS OF THE INDUSTRIALS
Aug. 2, 1921— 75.21	Sept. 10, 1921— 71.90
Sept. 23, 1921— 74.69	Dec. 15, 1921— 81.50
Nov. 29, 1921— 76.66	May 29, 1922— 96.41
May 29, 1922— 86.83	Sept. 11, 1922—102.05
Sept. 11, 1922— 93.99	Oct. 14, 1922—103.43
Oct. 16, 1922— 93.70	Nov. 8, 1922— 99.53
Nov. 3, 1922— 91.11	Mar. 20, 1923—105.38
Mar. 3, 1923— 90.63	May 29, 1923— 97.56
June 9, 1923— 84.92	July 20, 1923— 91.72
July 21, 1923— 80.75	Aug. 29, 1923— 93.70
Sept. 11, 1923— 80.53	Feb. 6, 1924—101.31
Feb. 4, 1924— 82.61	

mer high. This failure was repeated on November 3, but in each case the industrials made a new high. But these two highs formed a double top, which is often the signal for a turning point. The next high of the industrials failed to reach the preceding high, and thus confirmed the railroad averages and a primary bear market was under way.

The two averages consistently confirmed each other from August, 1921, until October, 1922, but after that the rails not only did not confirm the strength in the industrials but each succeeding high was somewhat lower than the preceding high. The break came in March, 1923.

TABLE 37

THE BULL MOVEMENT OF 1924-1925

THE HIGHS AND LOWS OF RAILROADS	THE HIGHS AND LOWS OF INDUSTRIALS
May 8, 1924— 81.94	May 9, 1924— 92.47
May 20, 1924— 81.37	May 20, 1924— 88.33
Aug. 18, 1924— 92.65	Aug. 20, 1924—105.57
Sept. 6, 1924— 88.78	Sept. 6, 1924—100.76
Sept. 24, 1924— 90.71	Sept. 24, 1924—104.68
Oct. 14, 1924— 86.18	Oct. 14, 1924— 99.18
Jan. 9, 1925—100.78	Jan. 22, 1925—123.60
Feb. 16, 1925— 97.83	Feb. 16, 1925—117.96
Mar. 5, 1925—100.96	Mar. 6, 1925—125.68
Mar. 30, 1925— 92.98	Mar. 30, 1925—115.00
May 29, 1925— 99.98	June 2, 1925—130.40
June 10, 1925— 96.98	June 10, 1925—126.75
Aug. 24, 1925—103.53	Aug. 25, 1925—143.18
Sept. 2, 1925— 99.93	Sept. 2, 1925—137.22
Sept. 23, 1925—103.78	Sept. 19, 1925—147.73
Sept. 30, 1925—102.46	Sept. 30, 1925—143.46
Nov. 2, 1925—105.19	Nov. 6, 1925—159.39
Nov. 10, 1925—103.26	Nov. 24, 1925—148.18
Jan. 7, 1926—113.12	Jan. 9, 1926—159.00
Jan. 21, 1926—108.26	Jan. 21, 1926—153.20
Feb. 13, 1926—111.46	Feb. 11, 1926—162.31
Mar. 3, 1926—103.20	Mar. 3, 1926—144.44
Mar. 12, 1926—111.21	Mar. 10, 1926—153.13
Mar. 30, 1926—102.41	Mar. 30, 1926—135.20

Here, as in the two preceding bull markets, the rails and industrials confirmed each other consistently. But after a final high on March 3, 1925, the rails refused to confirm the new highs of the industrials by failing to reach 100.96.

They showed consistent progress, however, because after the low of March 30 each succeeding high overtopped the preceding, and the lows made similar progress. It might have been expected that they would make a new high in due time and confirm the bull movement. In August the rails seconded the industrials and continued to do so until November 13, 1925, when the industrials failed to make a new high. The rails remained strong. The industrials rallied again, but now the rails after January 7, 1926, refuse their cooperation. The market broke on February 11, 1926.

THE "LINE" OR "SIDEWISE" MOVEMENT

It frequently happens for weeks at a time after a considerable rise or decline in the market, that the fluctuations in the averages are confined within a very limited range, perhaps three to four points for the industrials and two to three points for the rails. If the averages are plotted, there is neither an upward nor a downward trend. The graphs move within a narrow area in a sidewise direction.

It is our purpose here to give some illustrations of a "line" and its probable significance as to the future course of the market. A line in the market is due to an equilibrium in the supply and demand for stocks. If it occurs at the top of a major cycle it indicates distribution of stocks by the holders of great amounts; if it occurs at the bottom, stock is passing from weak hands into strong hands, that is, a period of accumulation is in progress. A "line" may also occur just before and at the end of a secondary swing in a primary movement of the market.

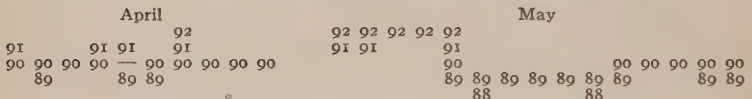
The Dow theory as developed by more recent writers, holds that a "line" signifies either accumulation or distribution, and that if one of the averages breaks out on the upper side of the narrow zone of fluctuation and is confirmed by the other average, the market will make a considerable advance before its direction is reversed. On the other hand, if one of the averages, say, the industrial aver-

age, breaks below the area of the side-wise movement and is confirmed by the railroad average, then the downward trend will continue for a relatively large number of points in the averages.

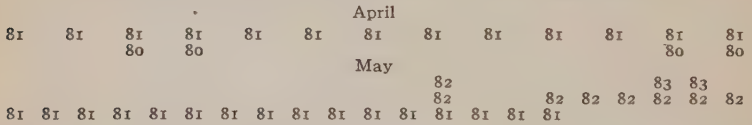
The "line" is best illustrated by the use of the figure chart. It eliminates all fractions, is easy to make, and gives all the useful details. Below are given three cases illustrating the characteristics of the "line." The first illustrates the advance in the summer of 1924; the second, the decline in March, 1925; and the third the advance in the summer of 1926. During the summer of 1924 money was very easy, business dull, and the presidential election just ahead.

FIGURE CHART OF INDUSTRIALS AND RAILS
APRIL 10 TO JULY 31, 1924

1. The industrials for April and May, beginning April 10.

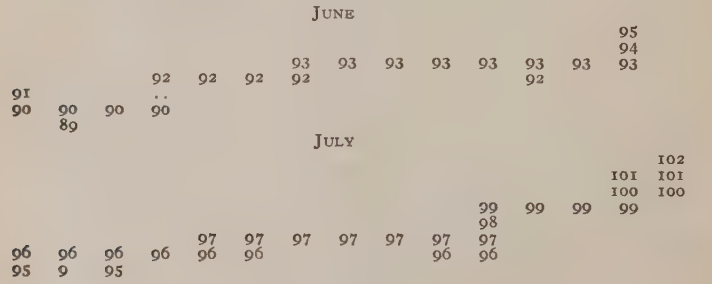


2. The rails for April and May, 1924, beginning April 10.

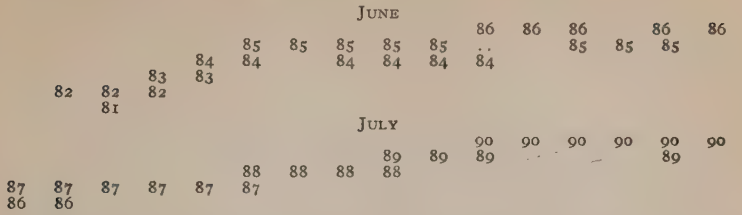


Here the industrials broke to 88, but this break was not confirmed by the rails.

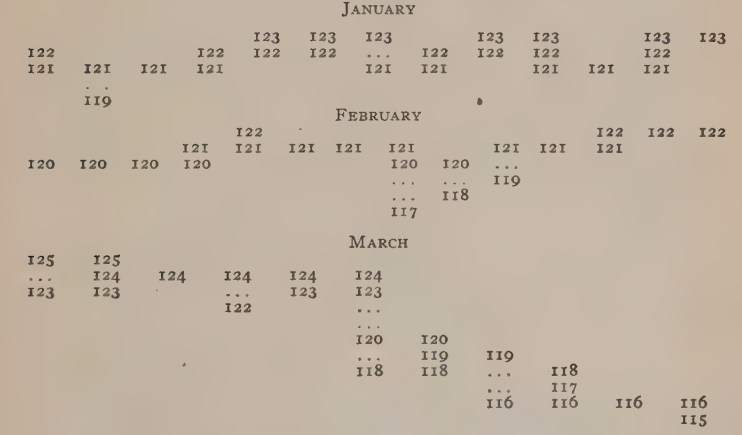
3. The industrials for June and July, 1924.



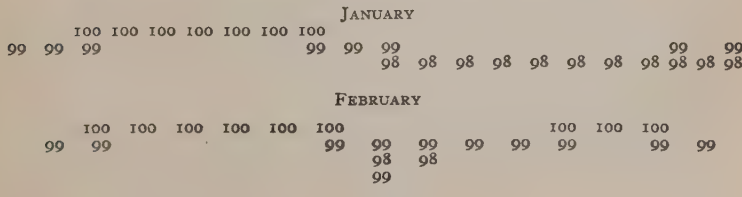
4. The rails for June and July, 1924.

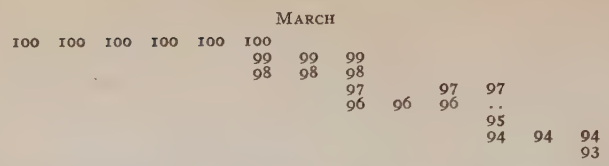


From the above chart it is evident that both the industrials and rails broke out above the "line," one confirming the other and indicating a somewhat prolonged rise in the market. By August 20 the industrial average had reached 105.57, and the rail average 92.65 on August 18. Next let us take what appeared to be a high point in the market, January, February, and March, 1925. Call-loan rates had risen appreciably, and the volume of sales was high.



5. The rails for January, February, and March, 1925.

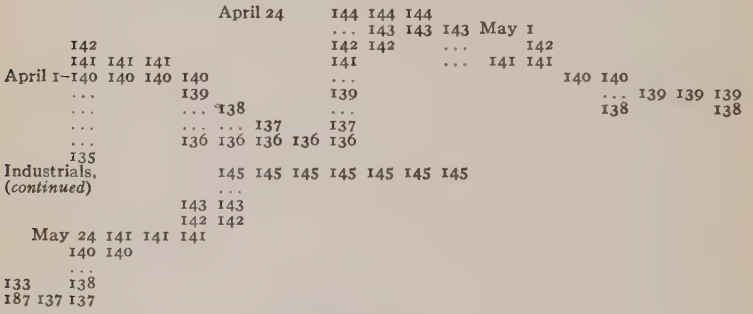




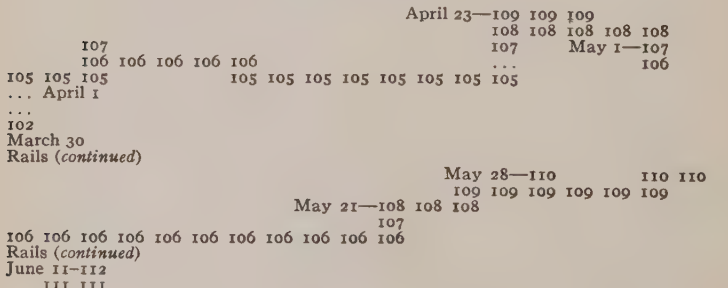
In February both averages broke below the trading area, indicating weakness. This was followed by the industrials' advance above the "line" but not confirmed by the rails. When in March both averages again went below, each confirming the other, it appeared that a reaction of some length was at hand.

The strength in the market during the summer of 1926 was indicated by the averages as is shown by the following comparisons.

1. The Industrials for April and May, 1926.



2. The rails for April and May, 1926.



The figure chart shows that there was persistent strength in the rails throughout April and May. This strength was seconded by the industrials and so the following months might be expected to be strong. This was especially true when the rails broke above their "line" in May and this sign of demand for stocks was seconded by demand for the industrials.

A study of a number of "lines" has confirmed Hamilton of the *Wall Street Journal* in the belief that a break by one average out of the narrow trading area, confirmed by the other, indicates a movement of considerable distance in the market and that in the case of major swings such confirmed movements are an accurate barometer of business.

The writer has found this true in all the "lines" made by the market since the war. It is, however, very difficult to be sure about the direction which a movement will take before it actually arrives and has gone a number of points. This uncertainty of interpretation renders the "line" of much less value to the conservative trader than some of the proponents of its significance would admit. Moreover, if the trader should always wait until the rails, for example, confirm the movement of the industrials he might have to be out of the market for months at a time. The line made by the rails during May, June, and July, 1925, consistently refused to confirm a rise of about fifteen points by the industrials during the same period, and a trader awaiting confirmation would have been out of this market all these months.

A "line" made by the market after a drastic liquidation of stocks, as in the first half of 1921, may fairly be taken to signify accumulation. At the top of a long advance, a "line" most probably signifies distribution, as in January and February of 1925, when large amounts of the old standard stocks were distributed.

Again, some lines are so simple as to admit of interpretation with a high degree of certainty; for example, the "line" made by the market in May, June, and July of 1924.

In short, it may be said that a figure chart of a "line" is a device that can occasionally give valuable aid in judging the market. It must never be relied upon alone, but must be used as one of many tools in the hands of the operator.

DOUBLE TOPS AND DOUBLE BOTTOMS

The reader is already familiar with the theory of double tops and double bottoms from his study of the methods of tape readers as outlined in a former chapter. It remains here only to state that while the theory of double tops and bottoms is held of considerable importance by many traders it seems not to be given so great weight by the recent disciples of Dow.

"It is by no means infallible, but is often useful; and experience has shown that when the market makes a double top or a double bottom in the averages there is strong reason for suspecting that the rise or decline is over."[2]

SUMMARY OF THE PRINCIPLES OF FORECASTING

The Dow theory holds that the stock market is a barometer of business. Its purpose is not to predict the movements of the stock market for purposes of trading, but to call the turns of the market in order to forecast business cycles or the larger movements of depression and prosperity periods.

The movement of the stock market is really a composite of three movements, a major movement, a secondary movement, and day-to-day fluctuations. The current fluctuations mean little for the market or for business. The secondary movements, that is, rallies in a major bear market and reactions in a major bull market, are simply corrections of the major movement which has gotten out of adjustment with the trend of business, the market either having declined more rapidly than the decline in business or having

[2] Hamilton, W. P., *op. cit.*, p. 159.

advanced more rapidly than business progress warrants. After a major movement has progressed for some time it may normally be expected to need an adjustment through a secondary movement.

Major bull movements may be expected on the average to last about two years, and bear markets about a year and a half. The beginning of a bull market may be expected, after a prolonged period of liquidation, when both the rail and industrial averages begin to show consistent strength, each new high going above the previous high and the new lows not reaching former lows. When both averages confirm each other consistently a turn in the market has come. No one can tell the exact length of a major bull movement nor how far the averages will advance, but as long as both averages keep making new highs the primary movement is still on.

After a long advance a bear market may be expected when one average refuses to confirm the further advances of the other. After this has taken place for some time with the weaker average making new lows, a failure of the stronger average to make its former high may be taken as a very good indication that the market will decline. Major advances are not the result of a day, but take much time to get under way. The same is true of major declines. The investor usually has plenty of time to study the market and to make his decisions.

Calling the major turns might be easy enough if the situation was never mixed by the secondary swings. A bull market has a break—for example, the break in March, 1925—but has a major turn begun? A bear market has a rally, but is the advance the beginning of a major bull movement? How can major movements be distinguished from secondary movements?

In the first place, according to Hamilton, these secondary movements usually last for a period of forty days or less.[3] Again, the "line" is useful in judging a secondary swing.

[3] *Ibid.*, p. 143.

For example, if after a reaction in a bull market the averages make a "line" and then break out above the zone of fluctuation it is a fairly certain indication that the reaction has been a secondary one, and that the primary movement will continue. On the bear side, an advance that stops in a "line" followed by the averages breaking out on the lower side of the "line" area, one confirming the other, is simply a rally in a major bear market. In these secondary movements double bottoms are good evidences that the reaction is over, and double tops that the rally is at an end.

CRITICISMS OF THE FORECASTING VALUE OF THE STOCK MARKET

For many years men have watched the movements of the stock market because they had a feeling that the movements in the prices of stocks were indicators of what might be expected in business sooner or later. It is probably true that the movements of the stock market create optimistic or pessimistic sentiment as to business conditions quite as much as optimistic or pessimistic views of business conditions affect the stock market. After the market has been making a few new highs everybody begins to see the constructive developments in business and forgets the unfavorable factors. On the other hand, after the market has declined consistently for several weeks, everybody begins to notice the bearish elements in the business situation and forgets the constructive components.

Probably no groups of men are more subject to the influence of the ups and downs of the market than financial writers, and especially the writers of the daily market news, and the average run of short swing traders. These centers of sentiment have their inevitable effect on business men.

The institutional center of a conscious and somewhat aggressive advocacy of this more or less vague feeling and belief on the part of many business men and financial writers has been the *Wall Street Journal.*

At its best this leading financial daily does not hold that the short swings of the market have any definite forecasting value for business, the long swings only being considered unfailing barometers. Major fluctuations in the market averages foretell major swings in business. Moreover, the barometric value of the market movements applies especially at the major turning-points of business. Some time after the turning-point from a major bear to a major bull movement, or from a major bull to a major bear movement, business will without fail take a corresponding turn.

Within the last five years many objections have been raised against this theory by business men and students of the business cycle. The market declines beginning in March, 1923, in February, 1924, March, 1925, and March, 1926, did not forecast any declines in business, according to opinions of these critics of the older theory. The typical criticism runs about as follows: "It may be noted that for more than three years, during the unusually easy credit conditions and relatively low money rates, the movements of the market have accompanied the corresponding movements of business rather than preceded them.. During that period the market has tended to be an index rather than a barometer of business."[4] Less cautious opinions even deny that the market has been an index of business in recent years.

Statisticians and students of business cycles have objected to the theory. They argue that (1) statistics do not warrant such a claim and (2) brokers, traders, and stock-market operators are no more intelligent as to the movements of business than business men and business economists.

In answering the question as to the barometric value of the stock market, the distinctions between the three components of the market must be kept in mind. Without any doubt the day-to-day fluctuations do not indicate anything

[4] The Brookmire Economic Service, Weekly Letter, July 26, 1926, *An Analysis and Forecast of Fundamental Conditions.*

as to the movements of business. No one claims any such relationship for these current fluctuations. Moreover, the minor swings lasting from a few weeks to six weeks or two months are usually caused by the technical position of the market. In a bull movement the market runs ahead of business, gets overbought; in a bear market the market declines more rapidly than business, gets oversold. In the first instance, a reaction is in order simply to correct the weak technical position and in the second case a rally will come due to the strength of the market structure as such. These reactions and rallies may or may not mean anything as to business itself; they may mean only that the market has gotten out of line with the business situation. Business prosperity may make the market fundamentally strong, though the technical structure of the market causes it to react. Or, again, in a period of declining business the market will be fundamentally weak, though for some weeks the technical structure may give it strength enough for a sizable rally.

Since the World War, at least, the minor swings in the stock market have had no barometric value, the reactions and rallies of the industrial averages having synchronized with like movements of business or having been met with no similar movement in business at all. The reaction in the market in the fall of 1922 began October 14 and lasted until November 27, but the business curve began to decline before October and started to rally about the middle of November. The reaction that occurred in the spring of 1924 began about the same date in February for both the stock market and business. The following advance was taken up by the industrial price averages two months before the advance of the business curve of the Harvard Index Chart. In the fall of 1924 a reaction in the market from August 20 to October 14 with over six points' decline in the Dow, Jones averages occurred at the same time that the business curve was climbing rapidly upward. Again the reaction of the spring of 1925, amounting to 10 points

in the averages, was almost exactly paralleled by the business curve as to the dates of beginning and end. The decline in the stock market of early 1926 was preceded by the business curve by six weeks or more.[5] Thus, since the major reaction of 1923 the barometric value of the stock market for business has been small. It must be said, however, that during this time there have been only secondary reactions in a bull market.

The major movement in the stock market which began according to the Dow, Jones industrial averages on August 24, 1921, was not in advance of the corresponding major advance in business. The index of general business activity of the American Telephone and Telegraph Company, a very careful piece of work, shows that May, June, and July of 1921 were the low months of the depression and that August made a rapid recovery.[6]

Again, building contracts awarded, according to the Federal Reserve Board's index for building contracts, show a very rapid recovery in March, 1921, in both the unadjusted and adjusted figures.[7]

Furthermore, the index of the volume of manufactures, comprising eight groups of manufacturing industries, touched bottom in July, 1921, at 68.5 on the monthly average of 1919 as a base. The recovery was pronounced, for the index reached 81.5 in August. Individual industries made their lows and recovery as shown in the table on page 504.

The data presented in Table 38 would seem to show that the beginning of the bull market of 1921-23 was concurrent with the revival of manufacturing and building. Several groups of manufacturing industries began their revival some months ahead of the stock market.

The declines in business in 1920 and 1923 and the revival after the decline in 1923, however, appear to have been forecast by the Dow, Jones averages some months in ad-

[5] Weekly Letter, July 3, 1926, *Harvard Economic Service.*

[6] See Vanderblue, Homer B., *Problems in Business Economics,* p. 603.

[7] *Federal Reserve Bulletin,* July, 1926, p. 487.

TABLE 38

INDEXES OF VOLUME OF MANUFACTURES FOR EIGHT GROUPS OF MANUFACTURING INDUSTRIES AT THE LOW POINT OF 1921 AND PERCENTAGES OF RECOVERY IN AUGUST, 1921*

INDUSTRY	Index Low 1921	DATE	INDEX Aug., 1921	Points of Recovery	Percentage of Recovery
Iron and Steel	34.0	July	46.0	12.0	35.3
Lumber	59.5	January	101.5	42.0	70.6
Paper	71.0	July	84.4	13.4	18.9
Petroleum	Declined throughout 1921				
Textiles	54.5	Dec. 1920	100.7	46.2	84.8
Leather	62.8	Feb.	85.7	22.9	36.5
Food	74.4	Feb.	96.7	22.3	30.0
Tobacco	73.5	Dec. 1920	118.3	44.8	60.1
All industries	68.5	July	81.5	13.0	19.0

*Figures taken from *Special Letter*, Dec. 24, 1921, The Harvard University Committee on Economic Research.

vance. Table 39 shows the dates of the turning-points of major swings in the Dow, Jones industrial stock price averages and the corresponding dates of turning-points of major movements in the several indexes of business since November, 1919.

TABLE 39

COMPARISON OF THE DATES OF TURNING-POINTS IN MAJOR SWINGS IN THE STOCK MARKET AND IN BUSINESS, 1919-1923

INDEXES	Beginning of Decline, 1919	Beginning of Revival, 1921	Beginning of Decline, 1923	Beginning of Revival, 1923
Dow, Jones Indust. Averages	November	August	March	Oct., 1923
Index of General Business American Tel. & Tel.	May	July-August	May	Jan., 1924
Volume of Manufacture Adjusted Index*	Jan., 1920	July	May	Jan., 1924
Vol. of Manufacture of Basic Material — Adjusted Index*	Jan., 1920	July	May	Jan., 1924
Pig-Iron Production, Adjusted Index*	Mar., 1920	July	May	Dec., 1923
Manufacture of Consumption Goods, Adjusted Index*	Jan., 1920	May	March	July, 1923

*Data taken from the Harvard Economic Service.

Table 39 shows that the Dow, Jones averages begin their decline in 1919, and again in 1923, some months ahead of the turning points in the business indexes. The revival after the decline of 1923 was in like manner forecast by the averages.

Turning points of major advances and declines in business as indicated by the business index of the American Telephone and Telegraph Company from 1906 to 1916 seem to have been forecast by the turning points in the stock price averages in every instance. The same is true of the Harvard Index of Trade except that the turning points in October, 1912, and December, 1914, correspond to those of the averages. The dates of turning points in different indexes are given in Table 40.

TABLE 40

DATES OF THE BEGINNING OF THE MAJOR DECLINES AND ADVANCES OF THE STOCK MARKET AND BUSINESS ACTIVITY 1906-1915

DATES OF BEGINNING OF DECLINES			DATES OF BEGINNING OF ADVANCES		
Dow, Jones Aver.	Am. Tel. & Tel. Bus. Index	Harvard Index of Trade†	Dow, Jones Aver.	Am. Tel. & Tel. Bus. Index	Harvard Index of Trade
Jan., 1906*	Aug., 1907	May, 1907	Nov., 1907	June, 1908	Mar., 1908
Aug., 1909	Mar., 1910	Nov., 1909	July, 1910‡	April, 1911	April, 1911
Oct., 1912	Jan., 1913	Oct., 1912	Dec., 1914	Jan., 1915	Dec., 1914

*The rails on December 11, 1906, reached the high of January within less than one point, the industrials on January 7, 1907, were within about six points of their high of a year before.

†Combines fluctuations of trade, transportation, manufacturing activity and industrial employment.

‡The rails advanced steadily after July, 1910, but the industrials after an advance of over 21 points made a new low in September, 1911.

The evidence seems to favor those who hold that turning points of the major movements of the stock market do forecast turning points in business cycles, though there are exceptions. What the figures would show if adequate and immediate data could be had is another question. There can be no doubt that the study of the business fluctuations by business men, the stabilizing effect of the Federal Re-

serve System, and the collection of adequate and current statistics by bureaus of business research, will in the near future create a body of intelligence that is superior to any influence which movements of the stock market may exert.

CONCLUSIONS

No one should be deceived by the claims of the advocates of the Dow theory that it is a completely scientific construction. On the other hand, it is nothing of the kind. It is simply a crude tool to accomplish a perfectly important end, namely to give an indication as to the relative strength of the supply of stocks coming upon the market and the demand for them. A number of illustrations have been given in the text which have shown the value of the theory for the interpretation of these particular cases.

As one reads the forecasts of the *Wall Street Journal* one is more and more convinced that the opinions of its editor depend quite as much upon his judgment as to business conditions in general as upon his use of the Dow theory. The stock market does not forecast the minor swings of business, but in the past the market has generally forecast its major movements as our very inadequate statistics have presented them. It is entirely probable that in the near future the statistician's graphs will parallel the significant movements of the stock market or, as in 1921, will precede them.

XXV

THE MONEY MARKET IN RELATION TO THE STOCK MARKET

Collateral loans explained. The demand for brokers' loans. The supply of funds for brokers' loans. The technique of making brokers' loans. Rates on brokers' loans and commercial paper. Interest rates and stock prices. The effect of seasonal fluctuations in interest rates. Interest rates and stock prices during cyclical movements. Conclusions as to the effect of call-loan and short-time interest rates.

THE parts which money and the money market play in investment and speculation has always called forth much discussion. The mechanism of the brokers' loan market; the effect of the supply of funds on the prices of securities and the activity of investors and speculators; and the effect of loans for Stock Exchange uses on the supply of funds for commercial and industrial purposes have for years attracted the attention of both students of business and finance and men engaged in the practical operation of the affairs of business and finance. It is the purpose of this chapter to explain the mechanism of making brokers' loans, the factors affecting call and time-loan rates, and the effect of interest rates on security prices.

COLLATERAL LOANS EXPLAINED

Collateral loans may come into existence in many ways. A business man may borrow on collateral for commercial, industrial, or consumption purposes; an investor may borrow directly from his bank on security collateral; or a broker may borrow from his bank for making payment on securities bought for a customer. We are interested, in this chapter, particularly in the latter type of loans, called brokers' loans.

Brokers' loans are divided into call loans and time loans. Call loans and time loans as quoted on the financial page always mean brokers' collateral loans. The need for funds by brokers varies from day to day. Certain amounts of funds will be needed all the time. The broker learns to estimate this amount and borrows on time to supply these constant needs. But from day to day there is a large margin of needs which cannot be estimated easily in advance. These needs are supplied on the call money market.

In an uncertain market or a very active market large call loans relative to time loans may be expected. The average weekly call loans for the first 25 weeks of 1926 amounted to nearly $1,900,000,000 as compared to average weekly time loans of about $848,000,000 for the same period.[1] The ratio of average weekly call to time loans was thus about 2.24 to 1. In January, 1926, when brokers' loans were at their peak, the average ratio for the month was 2.33 to 1; in April, after total brokers' loans had fallen $650,000,000, the average ratio was 2 to 1; in June, after considerable recovery, the average ratio stood 2.63 to 1. It has been said that before the World War commonly call loans were 60% and time loans 40% of total brokers' collateral loans. During the war period and since, the percentage of call loans has increased. What the normal ratio would now be is difficult to say.

Call loans are collateral loans made to brokers theoretically callable at any time by the party making the loan or payable at any time by the borrower. As a matter of practice, however, there is an unwritten law that a loan may not be called for payment after 12:15 p. m., but loans called before that time must be paid the same day. If loans were called late in the day, the last half-hour before closing might see a wild scramble to place new loans or to sell stocks on the floor of the Exchange. The operation of this unwritten law allows brokers whose loans are called several hours in

[1] *Federal Reserve Bulletin*, July, 1926, p. 524.

which to arrange new loans or to dispose of securities to provide funds for the payment of the loans called. Furthermore, if a broker's loans are not called before 12:15 p. m., he knows they will not be called before the next day. There is no fixed custom as to when a borrower shall pay his loans, but it is expected that he pay them relatively early in the business day. It is not uncommon for the banks to call 25 to 50 millions of dollars in a single morning.

Time loans are technically brokers' 60- and 90-day, 4- to 6-month and 9-month loans. Occasionally, a 12-month loan will be made. Whether a broker makes long-time commitments depends on his estimate of his need for funds and his belief that interest rates will tend to advance.

The collateral which supports a broker's loans consists of stocks and bonds of customers who have bought them on margin, and securities owned by the firm. At the end of each business day a broker finds that he either is a creditor or debtor. If he owes money to other brokers or to the Stock Clearing Corporation, he must borrow funds sufficient to pay his debts the next day. He borrows these funds from, let us say, a bank. Here he must put up collateral to the market value of $125 for every $100 borrowed. The collateral is assigned to the bank and put into its possession with full rights to sell it at public or private sale and without notice if a proper margin is not maintained.

Collateral is usually classed as (1) mixed, and (2) all industrial. Mixed collateral consists of railroad securities and industrial securities in varying proportion. Before the World War mixed collateral meant about 75% rails and 25% industrials. During the war period the industrials grew strong but the rails lost ground, and mixed collateral then might mean 50% rails and 50% industrials. In recent years the percentage of rails demanded has increased materially. The quotations on brokers' loans in the financial pages refer to loans in at least $100,000 units based on mixed collateral unless otherwise specified. The term "all industrial" is self-explanatory. Loans based on all indus-

trial collateral are not considered as favorably as those based on mixed collateral and, therefore, a higher rate is asked the borrower. Loans may also have all rails as security. The rate on these loans is about the same as on mixed collateral.

Bankers prefer, as collateral, stocks in 100-share units or multiples thereof actively traded in on some prominent exchange, preferably the New York Stock Exchange, so that there is a continuous market with narrow spreads between bid and asked prices. Comparatively wide margins and higher interest rates are always demanded on stocks that are inactive or are liable to fluctuate violently, because of high price, narrow market, instability of the issuing corporation, or manipulation.

In this connection one of the many brokerage houses in New York had the following to say about Curb stocks: "Our experience has shown that in time of great ease in the money market when only a very low rate of interest has been obtainable by the banks there has been a disposition by some banks to loan on Curb stocks without too great discrimination, in order to obtain a higher rate of interest and a rate often only ½% higher than the regular market. As a better demand for money develops either in the securities market or for commercial purposes with an attending advance in rates, these loans become increasingly difficult to negotiate, and when the market for standard loans reaches a 5% level, it has been our experience that Curb loans, in their diversified form, are almost impossible to obtain.

"In a loan market of 5%, banks can operate so profitably that they are unwilling to take any risks in their secured loans. We seem to be again approaching that period when a closer scrutiny of all securities will be made by the banks; this is now evidenced by the present attitude towards the general list of Curb stocks." [2]

Time loans are usually made under a separate contract

[2] The *Wall Street Journal*, December 23, 1923.

for each loan. A note is given by the broker to his bank, and collateral of the necessary market value and quality is put up with the lender. Call loans, however, are continually in a state of change. It, therefore, becomes convenient for the broker to give his bank a blanket contract covering his loans from day to day. This agreement contains the same provisions as any regular collateral contract and, in addition, the further agreement "that these presents constitute a continuing agreement, applying to any and all future, as well as to existing, transactions between the undersigned and said firm." [3]

THE DEMAND FOR BROKERS' LOANS

Large amounts of stocks and bonds are bought and paid in full by investors, corporations, trustees, insurance companies, and various other institutions. In many cases a part of the funds used in the payment of these securities is borrowed directly from banks, the broker, who receives payment in full, never knowing that funds were borrowed. No such borrowed funds come under the category of brokers' loans. Only loans to brokers and dealers in securities can be so classified. They arise usually from margin purchases by customers. For example, a customer buys 100 shares of a given stock at $90 per share. The stock is bought "regular way" and, therefore, the broker will be called upon the next full business day to pay $9,000 on delivery of the stock. The customer furnishes $25 per share margin and the broker borrows the remainder, putting up his customer's collateral plus the credit of his firm and, perhaps, some additional collateral furnished by the firm. If the customer puts up stocks or bonds instead of cash as his margin, the broker must borrow the full $9,000.

Bond and brokerage houses that float issues of securities usually borrow a large part of the purchase money for carrying the securities until they are sold to other brokers

[3] Meeker, J. E., *The Work of the Stock Exchange*, p. 189

or to the public. Such loans are brokers' loans. The loans of brokers who trade on their own account are classed here also.

From what has been said it is evident that the amount of loans demanded by brokers increases as the average price of securities rises and the activity in the market increases. This fact was pointed out in Chapter XVIII, "The Technical Position of the Market," where it was shown that brokers' loans reach a peak at or relatively near the turning-point in a major bull movement of the market. As the general price level of stocks declines and activity subsides, loans are paid off by brokers. This fact was well illustrated by the decline in the industrial stock price averages from 162.31 to 135.2, and in the rail price average from 113.12 to 102.41 in February and March, 1926, when brokers' loans declined from a high of $3,141,000,000 to a low point of $2,408,000,000. With the increased activity in the market during May, June, and July, brokers' loans increased to $2,620,000,000 on July 28.

As was pointed out in Chapter VIII, "The Stock Clearing Corporation," this institution eliminates the use of bank credit in large amounts. A broker may buy during the course of a business day many thousands of shares of stock but if he sells a like amount the same day he may need to pay the Stock Clearing Corporation only a very small fraction of the total amount of his purchases. He may even have a credit balance at the Clearing Corporation. Some other broker, however, then will have a debit and will borrow to pay the Clearing Corporation. In a bull market, when a broker's books show many buying orders and relatively few selling orders, his debits at the Clearing Corporation will be large and he must borrow large amounts.

The Stock Exchange rules limit the size of the margin business which a member firm may carry on its books to a reasonable relationship to the capital of the firm. At a time when the price level is high, when the market seems overbought, and when the loans of a brokerage house are

running close to the limit allowed by the Exchange authorities, a broker may advise his customers to sell short. The sales will offset the purchases and diminish the amount of loans needed. Margins put up by customers on short sales also aid in diminishing the need for borrowing to carry long customers. When buying and selling are in proper proportions, especially in a falling market, a brokerage firm may not be borrowing at all, but, on the other hand, it may have a surplus of funds which it is lending on the market at call.

THE SUPPLY OF FUNDS FOR BROKERS' LOANS

The funds loaned to brokers come from banks, corporations, and money brokers for the most part. The report made to the Federal Reserve Bank of New York by the New York City member banks divides loans to brokers as follows: (1) for own account, (2) for account of out-of-town banks, and (3) for account of others. These terms are largely self-explanatory. During January and February, 1926, the member banks in New York City leant for their own account 39.1%; for the account of out-of-town banks, 41.8%; and for the account of others, 19.1% of the total loans to brokers reported by them. According to these figures, banks in the interior contribute at least as much toward the funds available for loans on stock market collateral as do the New York banks. Besides out-of-town banks, other institutions, like manufacturing concerns, insurance companies, railroads, and so forth, also loan through New York banks to an amount practically equal to one-fifth of the total of brokers' loans.

In addition to money loaned by the banks, a very considerable amount of money is usually available through money brokers. These men secure funds wherever they can and offer them to brokers. They place money for banks, industrial corporations, and financial institutions of various kinds usually on a commission basis. At times they supply money at a figure sufficiently below the official rates at the

Stock Exchange to attract much business. In February, 1926, when the Federal Reserve Board was reporting over $3,100,000,000 of brokers' loans, the New York Stock Exchange was reporting over $3,535,000,000; and again, about April 1, the figures were $2,573,000,000 and $3,000,000,000 respectively, or a difference well over $400,000,000 in each case.[4] No doubt, money brokers were responsible for a good share of this total not reported by member banks.

The conditions surrounding the placing of funds on the brokers' loan market are very different from those that prevail in the commercial loan market. Commercial needs form the great body of all bank loans and are always given preference to loans to brokers. Banks feel that their commercial customers must be taken care of first and after this is done whatever funds remain unused are made available for brokers' loans. Due to the great surplus of funds which banks everywhere have had on deposit recently with no commercial employment available, practically only four avenues of employment for the funds were open: (1) the purchase of commercial paper, (2) the purchase of securities, (3) deposits with large New York banks at a low rate of interest, and (4) loans to the New York money market. All these methods have been used. Great amounts of money have gone into investments, large balances have been built up in New York banks, which in turn are leant on call. Furthermore, these New York banks have acted as agents to place large amounts of funds for interior banks on the call loan market. Smaller banks have been taught how to make loans on the call money market, and at present, banks that formerly would have had nothing to do with the stock market now have relatively large amounts of funds loaned there.

Not only is the call money market an outlet for the otherwise unemployed funds of the banks throughout the country, but it is also a means of liquidity and, from this point of view, a very significant factor in the business of banking

[4] *Commercial and Financial Chronicle,* April 10, 1926, p. 1958.

and its proper functioning. During the depression years of 1920 and 1921, Stock Exchange loans proved the most liquid of all loans, and since that time the same has been true. Town and city banks carrying county, city, and state funds due on demand; banks that cater largely to farmers; and banks whose clientele does not provide proper diversification of loans find the call-loan market their best means of maintaining a liquid position. Large city banks with many correspondents find that their ability to pay their correspondents on demand depends upon keeping a considerable part of their secondary reserve in the form of call loans. The New York City banks carry large correspondent accounts and must keep their funds liquid.

The point of this discussion is that the conditions surrounding the supply of funds in the call money market are such as to make these funds emergency provisions to a larger extent than is realized by the public. They are surplus funds kept available for regular commercial uses when the need arises, or they are funds kept liquid because subject to call at any moment. It is thus evident that the supply of stock market funds must be constantly subject to relatively large changes.

The point next to be noted is the fact that the supply of funds varies largely independent of the demand for them. In many other fields supply and demand are more or less directly related and move parallel with each other. The supply of money on call and the demand for it, however, are only very indirectly related. Gold is imported or production at the mines increases and surplus supplies of funds come on the market regardless of demand; business becomes cautious in its use of funds and the surplus comes to New York; business booms and funds are borrowed in New York and taken from there. The market advances and declines with business, and funds are liable to be scarce when the market's needs are greatest and most plentiful when the market's needs are smallest. The outcome of the situation is that call-loan rates fluctuate widely not only

from season to season or month to month, but even from day to day or hour to hour.

From this point of view it is a mistake not to allow the Federal Reserve banks to rediscount Stock Exchange loans. The Bank of England freely discounts loans with London Stock Exchange collateral. Money can then flow smoothly between the banks, the Central Bank, and the Stock Exchange. If the Federal Reserve banks were allowed to discount New York Stock Exchange paper, call money and time-loan rates could not fluctuate as widely as they do without the cooperation of these banks.

The indirect use of Federal Reserve bank credit for supplying funds to the call loan market prevents violent fluctuations, for example the 100% per annum, which was experienced before the World War. A more direct relation between the two institutions would further stabilize rates.

Furthermore, the attempt of the Federal Reserve banks to build up a large discount market in New York may compel a closer and more direct cooperation between the Federal Reserve banks and the stock market because the discount market cannot maintain the stability of rates which is so essential to its growth when the brokers' loan market is fluctuating widely.

THE TECHNIQUE OF MAKING BROKERS' LOANS

Time loans are always made outside of the New York Stock Exchange directly between a banker or money broker and the broker or his firm. Call loans are made either directly between the lender and the broker outside of the Stock Exchange or on the floor of the Exchange. Many brokers prefer to borrow much of their credit needs directly from the bank of which they are regular customers and with which they have an established standing. Moreover, while the rate on call loans changes every day, loans made directly with the broker's own bank frequently carry a fixed maximum and minimum rate regardless of the market rate.

Both the banker and the broker are thus protected against wide fluctuations of market rates.

We have thus two markets for time loans, the banks and money brokers; and three markets for call money, the banks, the money brokers, and the Stock Exchange. Since the rates on call money that dominate the market as a whole are made on the floor of the Stock Exchange, a presentation of the technique of this call money market is essential to an understanding of the causes that operate in fixing interest rates.

The Stock Exchange money market has had a long development which for the practical purpose of description may be divided into the pre-war period, the war period, and post-war period. Before the World War, money was bought and sold at a post on the floor of the Exchange through a process of bidding and offering by members of the Exchange in quite the same manner as any stock, say, United States Steel, was bought and sold at its post. Thus there were the money post and the money crowd. As at other posts, transactions at times were quiet and orderly but, at other times, the well-known psychological effects of keen competition were dominant.

The large banks and corporations which lent funds on the Exchange did so through members who offered the funds at the money post to borrowing members. After a loan was agreed upon between a lending and a borrowing member, each notified his firm, which in turn communicated with its client. The borrower presented his collateral to the lender and received his credit. Here is where the cumbersome custom of using the certified check came into vogue. A broker who for any reason transferred his loan from one bank to another had to go to a third bank and make a loan on his unsecured promissory note. Knowing this, the original lender demanded a certified check before giving up the collateral on payment. "Morning loans" and "overcertification" were the way out of the difficulty.

Many call loans were carried day after day and as long

as not terminated by either party were automatically renewed. Custom held that the previous day's rate should hold over unless one party to the loan was not satisfied and communicated his objection to the other. In that case, the renewal rate, which was simply an average of the rates at which some millions of dollars had been loaned immediately after the opening, was often accepted as a compromise.

This pre-war development lacked a systematic method of fixing the market rate on call loans, provided no standard rate for renewing old call loans, and, moreover, provided no efficient means of clearing loans.

The second stage in the development of the Stock Exchange money market began in 1917. After America had gotten into the World War, it became necessary at first to guarantee a supply of funds to meet the needs of trading in securities and later to ration funds to brokers in order to prevent them from enlarging their demands beyond the limits of the supply of funds. The war demands on business, and the needs of the government for credit led to the withdrawal of funds from the call money market. Moreover, because loans secured by Stock Exchange collateral were not eligible for rediscount at the Federal Reserve banks, member banks preferred to put their funds into government obligations which might be used as security for eligible paper. On the other hand, the withdrawal of large amounts of funds would make interest rates on call loans advance so high as to thwart the policy of floating Liberty bonds at a low rate. To overcome all these difficulties a money committee was organized in September, 1917. After some experimentation, the whole Stock Exchange needs as of a certain day, amounting to more than $400,000,000, was apportioned among the lending banks of New York City which were made responsible to furnish at any time their allotment of ready funds. In this way an adequate supply of call funds was practically guaranteed as long as the demands were kept within limits. The committee found control necessary at this point also and strictly

limited brokers' loans by systematic rationing of the available funds.

Now all this control required many reports and much information on the part of the Money Committee. The old system of bids and offers at the money post was no longer practical, and the money desk took its place. Here the lenders reported their supplies of funds and brokers their demands. Here, also, funds were apportioned and interest rates fixed.

The Money Committee gave up its control in January, 1919, but the practical working of the money desk had proved so far superior to that of the money post that the money desk was retained as a permanent feature of the apparatus of the Exchange.

The present methods of making loans on the floor of the Exchange are a continuation and development of the practicable features of the money desk inaugurated during the war period. At present, each morning after having made an estimate of the amount of funds which they will have available for call loans, banks inform their brokers, who offer through their floor members the designated amounts. The clerk at the money desk registers the lending brokers' names, the amounts offered, and the rate asked in each case.

In like manner, brokers wishing to borrow from lending brokers make their demands known at the money desk. The clerk at the money desk thus has before him each morning an estimate of the supply of funds and the demands for them. His next duty is to bring together the lending and borrowing members on the floor of the Exchange. When the borrowing member meets the lending member to whom he is directed, an agreement is made as to the amount of the loan, the rate, and other essential items. After the agreement has been made and the principals informed, the brokers on the floor have completed their part of the transaction. The transfer of collateral and funds between the borrower and lender will regularly be made through the Stock Clearing Corporation according to the requirements

of a "return loan" or a "new loan" agreement. Not all lenders of money have the right to make loans through the Clearing Corporation. When loans are made with these "non-clearing lenders" the transaction must be handled "ex-clearing house." After the first loan is made, the clerk at the money desk posts the rate agreed upon for the loan. This rate is the market rate and is changed after each new loan made at a figure different from that posted.

The fact of the differences in time in points west of New York is a cause of many fluctuations in the market rate from time to time. For example, when banks in San Francisco find that they will have a large surplus of funds, they request New York banks to lend these funds on call. But the Stock Exchange day may be nearly over and brokers may have supplied their needs. The result is a sharp drop in call rates. Furthermore, when far-western banks instruct their New York correspondent to call loans, unusual tightness may occur late in the day.

Each day on the call money market there are posted and effective two rates of interest: (1) the market rate, which changes with fluctuations in supply and demand and applies to all loans made that day; and (2) the renewal rate, which remains the same throughout the day and applies to all call loans which have been made on some previous day and are renewed for another day. For example, if a broker has made a call loan at an agreed rate and does not pay the loan the following day, his bank will automatically charge him the renewal rate of interest.

Neither the borrower nor the lender is bound by the renewal rate, for if the borrower thinks the rate too high, he can compromise with the lender or pay his loan. The lender, when not satisfied, can ask for an adjustment from the borrower or call the loan.

As a matter of fact, the renewal rate so well gages the average market rate that both borrowers and lenders have learned to accept the former rate as on the whole a satisfactory figure.

Estimates differ as to the amount of call loans that are carried over one day. Perhaps, 95% of the total amount of call loans made on the Exchange are renewed so that the market rate applies to only 5% while the renewal rate applies to approximately 95% of the total loans outstanding on any day. It is therefore the representative rate for call money.

The renewal rate is determined with great care each morning as a part of the work of the Stock Clearing Corporation. The Clearing Corporation has available each morning a record of the loans and rates of the preceding day, week, and month; the shares of stock sold and their prices; the amount of funds that remained unemployed the previous day or the amount of funds demanded but not supplied; the estimated demand and supply for the current day, and other relevant data. Besides these data on the money situation, the Clearing Corporation also gets the opinion of the largest lenders and borrowers of money as to what should be a fair rate. This is done by consulting the lending banks and the largest borrowing brokers. The body of facts concerning the money situation mentioned above is then reviewed by a committee of experienced men in the light of the estimates of all the leading New York banks and brokerage houses, and a rate which seems fair to all concerned is fixed. This rate is posted at the money desk daily at about 10:40 a. m. and stands for the day. So accurately is the committee able to gage the call money market that in a "four-year period it [the renewal rate] has not varied more than one-tenth of 1% from the weekly average rate of new loans made on the Exchange." [5]

RATES ON BROKERS' LOANS AND COMMERCIAL PAPER

Relation of the rates. Mr. Hubbard, of the staff of the Harvard Economic Service, found that from January, 1922, to December, 1925, the rate on brokers' 90-day to 4-month

[5] Westerfield, Jason, The *Wall Street Journal,* July 22, 1926.

TABLE 41

COMPARISON OF RATES ON COMMERCIAL PAPER AND TIME LOANS, 1922-1925

Average of Weekly Rates*

	1925	1924	1923	1922
Brokers' Time Loans....	4.24	3.74	5.10	4.55
Commercial Paper.....	4.01	3.91	4.95	4.42

*Data from *Review of Economic Statistics*, January, 1926, p. 26.

mixed collateral loans and that of prime 4- to 6-month commercial paper corresponded very closely throughout the period. The rate on brokers' time loans showed a tendency to fluctuate somewhat more frequently and widely than the rate on prime commercial paper. The average weekly rates on 4- to 6-month commercial paper, and 90-day to 4-month brokers' loans for the years 1922-1925 are given in Table 41 above.

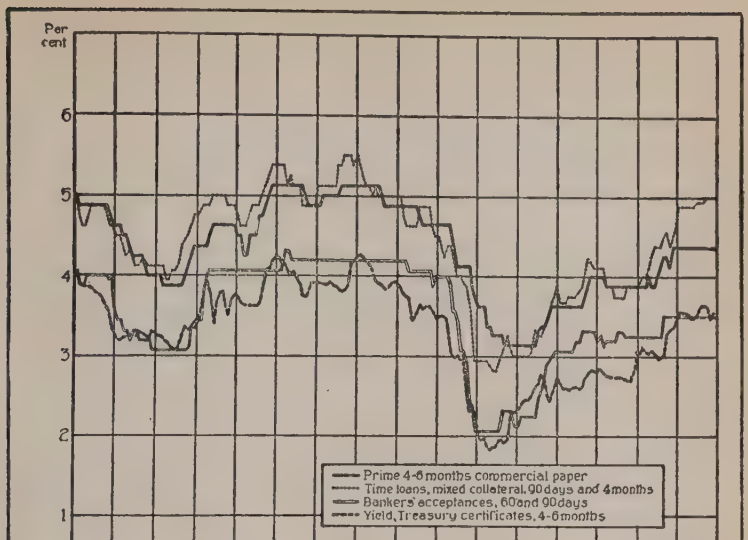
The above figures show a close correspondence between the rate on brokers' time loans and that of commercial paper. The maximum spread in the weekly rates on time loans and commercial paper were as follows: 1922, .38%; 1923, .38%; 1924, .81%; 1925, .62%.

The rate on bankers' 60- to 90-day acceptances is on an entirely different level from that of time loans and commercial paper, the average weekly rate for 1924 being 3% and 1925, 3.31%.[6]

The close relation between the rate on brokers' time loans and that on commercial paper is shown in Figure 12. That the rate on bankers' acceptances is on a different level is also evident from the position of the graph of the rate on bankers' acceptances in the chart.

The relation between 4- to 6-month prime commercial paper and call loans are not as close as those between commercial paper and time loans. Table 42, on page 524, gives

[6] *Review of Economic Statistics*, January, 1926, p. 26.


Per cent
6
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1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12
1922
1923
1924
1925
Prime 4-6 months commercial paper
Time loans, mixed collateral, 90 days and 4 months
Bankers' acceptances, 60 and 90 days
Yield, Treasury certificates, 4-6 months

Review of Economic Statistics, January, 1926, p. 24.

Time money: Average of mean of range for 90-day and 4-month loans on mixed collateral.

Commercial paper: Mean of range of 4- to 6-month prime paper.

Bankers' acceptances: Average of mean of bid and asked rates, 60- and 90-day acceptances.

Treasury certificates: Federal Reserve Boards' index of yield.

Figure 12: Open-market money rates in New York City—weekly 1922-1925.

the average for the monthly average rates for both types of loans for the period 1922-1926.

Professor Scott some years ago made a study of money rates in the New York money market covering the period 1896-1906. His conclusion is as follows: "Ordinarily the rates on call loans are the lowest, those on time loans higher, and those on commercial paper highest." [7]

In the period 1922-1926, rates on call loans were higher than those on commercial paper two years in five. It is probable that the operation of the Federal Reserve System

[7] Scott, W. A., *Money and Banking*, Fourth Edition, p. 306.

TABLE 42

COMPARISON OF RATES ON COMMERCIAL PAPER AND CALL LOANS, 1922-1926

Average of Monthly Rates*

	1926†	1925	1924	1923	1922
Call Loans.....	4.54	4.50	3.10	4.84	4.38
Prime Commercial Paper	4.12	4.01	3.90	4.97	4.42

*Data from *Weekly Letter* of the Harvard Economic Service, August 7, 1926.
†To July 31.

favors the rate on commercial paper as compared with brokers' loans.

The data on money conditions. The interest rates on the different types of paper are quoted daily in the daily newspapers. Summaries of daily rates are given at the end of the week in the dailies and the financial weeklies.

Weekly data are reported by the New York Clearing-House Association and the Federal Reserve Board. The report of the New York Clearing-House banks comes out each Saturday and is published by all the leading financial papers. The report gives the average condition of each member of the Clearing-House Association for the week under the following heads: (1) new capital, (2) profits, (3) loans, discounts, and investments, (4) cash in vault, (5) reserves with legal depositories, (6) net demand deposits, (7) time deposits, and (8) bank circulation. The actual condition of each bank is not shown separately but the total of the actual figures for the members that are also members of the Federal Reserve System, the total for state bank members that are not members of the Federal Reserve System, and a total for trust company members that have not entered the Federal Reserve System are given. A broker with the information on the actual condition and the average condition of all the members can tell if conditions have become worse or better toward the end of the week. Furthermore, he can

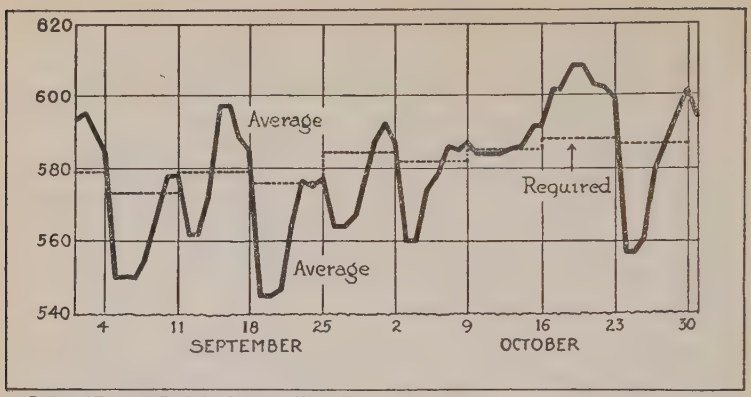
see the average condition of any individual bank in which he may be interested. The actual condition of New York City banks not members of the Clearing House Association are given each week in separate reports.

Supplementary reports give the average and actual condition as to total reserve, the reserve required, and the surplus reserve. The interpreter of these reports notices first the reserve position of all the banks. Are average surplus reserves increasing? Is the actual condition a surplus? Affirmative answers are favorable to the bulls. If there is at the end of the week a sizable deficit in reserves, loans will most probably be called the first of the following week.

The next point to study is the relation of loans to deposits. If loans are increasing more rapidly than deposits and if total reserves are falling behind, money will tighten. On the other hand, if loans are decreasing and deposits are increasing or, perhaps, decreasing less rapidly than loans, then money will tend to get cheaper. This is especially true if reserves are increasing.

Each week the Federal Reserve Board releases for publication on Friday morning a detailed statement of the resources and liabilities of each Federal Reserve bank as of the close of business of the preceding Wednesday. The data for the 12 Federal Reserve banks are also combined into a consolidated statement giving the total resources and liabilities of the System as a whole.

On Monday of each week the Federal Reserve Board releases a statement of the principal resources and liabilities of about 700 member banks in 101 leading cities throughout the country classified by Federal Reserve Districts. There is also a consolidated statement of all reporting member banks, a statement of the reporting member banks in New York City, and a statement of the reporting member banks of Chicago. These weekly figures are all brought together in a monthly summary which with many other business and financial statistics is published monthly in the *Federal Reserve Bulletin*. The reports made by the banks to the Comp-



Review of Economic Statistics, January, 1926, p. 15.

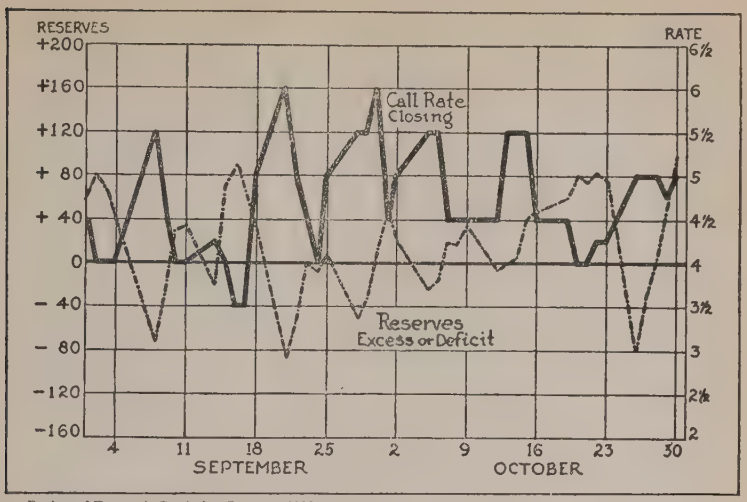
Figure 13: Average reserves of 23 New York City banks compared with reserve requirements.

troller of the Currency are summarized and published by the Comptroller as soon as convenient. These reports, with reports made by state banks to state banking departments, are also published in the *Federal Reserve Bulletin*.

In the weekly reports of the Federal Reserve banks the items (1) reserve ratio, and (2) rediscounts are of particular interest. The Federal Reserve ratio is derived by dividing the total reserves of the whole system by the sum of the deposits plus the Federal Reserve notes outstanding. A material decline means that gold is being lost or that rediscount and open market operations are increasing or both.

The item, rediscounts, is probably more important for the moment than the reserve ratio. When rediscounts are increasing, the member banks are borrowing. Material increases in rediscounts lead to advances in money rates.

Again, the New York Clearing-House statement of members' condition may show a sizable surplus reserve, actual and average, which would lead one to believe that money in New York should be easy. But when it is seen that the surplus reserve is borrowed by means of rediscounting, the whole situation takes on a different outlook. Such a situation would not be permitted to last long by the banks. New



Review of Economic Statistics, January, 1926, p. 16.

Figure 14: Daily excess or deficit in reserves of 23 New York City banks and the closing call-loan rate.

York City banks are required to keep 13% of their net demand deposits on reserve. In practice, the reserves required amount to 13% of the average daily net demand deposits for each week. Banks frequently lend money regardless of their reserves, expecting to bring up the deficit later on. This practice accounts for the relatively low rates for a few days followed by a relatively high rate. In Figures 13 and 14 are given two charts constructed by W. Randolph Burgess, of the Federal Reserve Bank of New York, which illustrate the movements of reserves and call-loan rates. The heavy curve of the chart in Figure 13 shows the average daily reserves from week to week. The average is cumulative so that when the curve reaches the "required" line all the deficit has been made up. Figure 14 shows the very definite correlation of call money rates to an excess or deficit in the reserves. Both charts cover the same period, September and October, 1925.

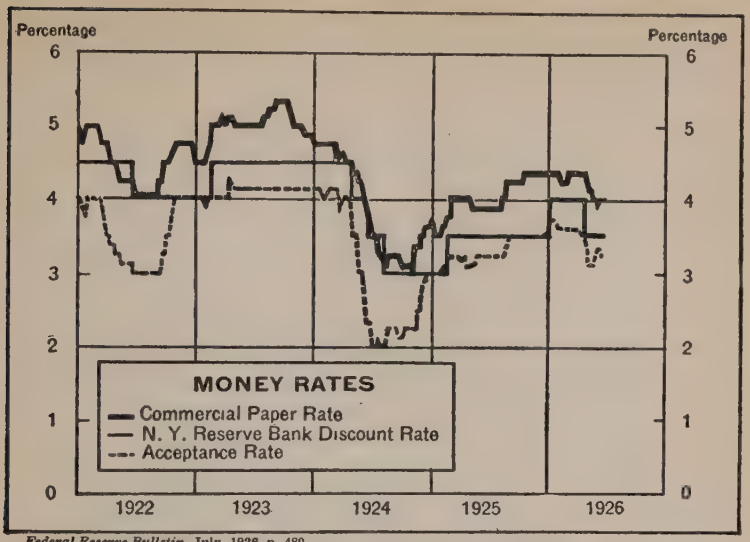
In the statement of member banks, loans and discounts,

deposits, and reserves are the most significant items. If loans are increasing more rapidly than deposits, then money will sooner or later be called from New York; but if deposits are gaining on loans, then money will be flowing to New York. Increasing rediscounts indicate short reserves and later tightening of money. These results hold for both call and time money.

Besides the items mentioned, any special demands on the New York money market, like the government demands on the market, first of the month payments of interest and dividends, holiday trade demands, and exports of gold, will tighten money temporarily. As funds are deposited by the government, gold is imported, money that has been distributed flows back to New York, and, in general, as special demands cease, money will again get easier.

In judging the longer trend of interest rates on brokers' loans, the rate on prime commercial paper is basic. Both call and time rates fluctuate with reference to the commercial paper rate. This rate is determined by exports and imports of gold; the shifting of funds to or from New York; the trend of business; the trend of prices; the bond and stock market; government financing; the foreign money situation as indicated particularly by the Bank of England rate and the foreign exchanges; and the Federal Reserve banks' rediscount rates. All these factors are essential in judging the trend of interest rates and must be taken into account.

The New York Federal Reserve Bank's rediscount rate is usually adjusted so that it falls between the rate on 4- to 6-month commercial paper and the rate on bankers' acceptances. When the rate on bankers' acceptances rises near the rediscount rate, an advance in the rediscount rate may be expected. This is especially true if the stock market is very active and stock prices are rising and if the rediscounts at the New York bank are increasing more rapidly than has been the rule for some time. The advance of the



Federal Reserve Bulletin, July, 1926, p. 480.

Figure 15: Weekly rates in the New York money market.

rediscount rate in New York from 3½% to 4% effective on August 13, illustrates these points. The rates on commercial paper and bankers' acceptances for the week ending June 12, 1926, were 4% and 3¼%, respectively; on August 10 they had advanced to 4¼% for commercial paper and 3½% bid, 3⅜% asked on bankers' acceptances. The stock market was very active with prices very high, brokers' loans increasing rapidly and rediscounts mounting at an increasing rate. The conditions for a rise in rediscounts were all present.

Figure 15 presents the relationship that has been maintained between the rediscount rate, the rate on 4- to 6-month prime commercial paper, and the rate on 90-day bankers' acceptances.

The rates of interest on long-time commercial paper and brokers' loans are a good index of the opinions of bankers on the trend of money. For example, if 6-month brokers' loans can be secured at 4½%, bankers do not expect money to become very scarce. On August 10, banks were lending

6-month money at 4¾%. This is an index of the money market 6 months hence and, indirectly, of the next 6-month period as it is estimated by the bankers.

INTEREST RATES AND STOCK PRICES

The effect of cheap or dear money upon stock prices must be studied from the point of view, first, of the day-to-day variations; second, the seasonal fluctuations; and third, the cyclical movements in money rates.

In general there are at present two attitudes as to the effect of money on the stock market, one tends to give great weight to the effect of easy or tight money on stock prices; the other tends to minimize such an effect.

The first point of view holds that a plentiful supply of money at low interest rates tends to cause the price of stocks to go up and, on the other hand, scarcity of funds and higher interest rates tend to cause the price of stocks to decline;[8] the second point of view denies that the interest rate has any great effect on stock prices.

The effect of seasonal fluctuations in interest rates. The facts are that before the establishment of the Federal Reserve System there were wide seasonal fluctuations in interest rates. No one can tell what the ultimate effect of the Federal Reserve System will be in the way of stabilizing interest rates. For the present, however, the seasonal variations seem to be still with us though in a greatly modified form. The Committee on Economic Research of Harvard University, in adjusting interest rates for seasonal fluctuations beginning in 1922, uses one-half the amount of correction found necessary before the World War. The case of those who hold that interest rates are of great significance as it applies to seasonal fluctuations is summarized in the following paragraphs.

In January and February and again in June and July

[8] See Holdsworth, J. T., *Money and Banking*, 1923, pp. 235 ff, for an excellent example of this reasoning.

money flows to New York, causing a plentiful supply and low interest rates. At these times brokers employ these surplus funds in the market and prices of stocks go up. On the other hand, in March and April and again in September and October funds are in demand by agriculture and business and flow away from New York City leaving them scarce there. The effect on the stock market is that loans are called, rates rise, and prices drop. The degree of violence with which these changes in interest rates and stock prices take place depends on the position of the money supply with reference to agricultural and business needs.

The reasons for holding that cheap money causes increased activity on the stock market are as follows:

1. When money can be borrowed for 3% and used to purchase stocks yielding 7%, investors and traders find it profitable to borrow money and buy stocks. On the other hand, when money is dear no such profit can be made, and traders sell out.

2. When stocks are bought for an advance, profits are materially reduced by an advance in interest rates. Marginal traders will stop their activities, and others, with reduced profits, will be much more cautious in their commitments. On the other hand, profits are materially increased by reductions in interest rates, and traders now make large profits while others gain largely. Profits beget optimism and prices are bid up.

A careful study of the seasonal variations in the rate of 4- to 6-month prime commercial paper was made by the Harvard University Committee on Economic Research covering the period from January, 1890, to January, 1917, which showed marked seasonal variations as follows: January and February, the rate comparatively low; March, April, May, the rate relatively high; June, July, and August, money relatively easy; and September, October, November, and December, money relatively high. On the other hand, Mr. Persons' study of seasonal fluctuations in the prices of stocks covering the period from January, 1897, to January,

1914, gave "no evidence of the existence of a systematic seasonal variation." [9]

Now, if the seasonal high and low money rates have any consistent effects on stock prices, then the statistics should show well-defined seasonal fluctuations in stock prices. This is not the case, and the conclusion as to the effect of seasonal changes in money rates on stock prices must be negative.

Owens and Hardy, in their study of the relation of interest rates to stock speculation, found that call-loan rates, covering a period of 20 years beginning January, 1872, and ending December, 1891, had distinct seasonal fluctuations corresponding to those found by the Harvard people. On the other hand, industrial stock prices did not show any seasonal bent.[10] Their study of railroad stock prices covering the period from 1866 to 1880 showed no seasonal fluctuations at all, though the variations in call-loan rates were distinctly seasonal.

When call-loan rates and industrial stock prices were compared directly, month by month, for the period January, 1872, to January, 1914, Owens and Hardy found that of the months which showed an advance in call-loan rates over the preceding month, 98 had an advance in stock prices, 88 a decline, and 53 no change. When rates declined, 94 months showed an advance in stock prices, 97 months a decline, and 60 months no change. During the whole period call rates advanced in 239 months and declined in 251 months. Surely, these facts do not indicate any dominant relationship between changes in stock prices and seasonal variations in interest rates.

Owens and Hardy further agree that the earnings for seasonal periods due to the difference between a low interest rate and a high dividend rate is, after all, negligible, and does not compensate for the risk that must be taken by the

[9] *Review of Economic Statistics,* 1919, Vol. I, p. 147.

[10] Owens, R. N., and Hardy, C. C., *Interest Rates and Stock Speculation,* pp. 22-26.

trader who deals in stocks for the marginal income above interest changes. In the first place, the purchase and sale of 100 shares of stock held for one month would cost more for commissions and tax than the difference between 2% money and a 6% dividend. If a stock bought and sold at $100 is held two months, the profits under present commission rates would be about 13 cents per share. Now the least spread between the bid and asked price is 12½ cents. Larger spreads are more probable. If, then, the price of the stock remained absolutely the same at the time of sale as at the time of purchase, all the profit would be required to meet the loss due to the fact that one buys at the asked price and sells at the bid price. Furthermore, day-to-day fluctuations in the price of shares of stable stocks amount from a half-point to several points, which would quickly turn black figures to red.

Again, a difference of a few per cent per annum does not materially decrease the trader's profit. For example, suppose a dealer buys 100 shares of stock at $100 and the stock goes to $105 in one month. His profit will be somewhat over $410 when interest is 4%, and $16.67 less when interest is 6%. So small a difference would not discourage trading.

Comparisons of seasonal fluctuations of the volume of sales with seasonal variations in call-loan rates not only gave negative results for the theory under discussion, but showed that "a tendency exists for a large volume of sales to be made in months of high rates, and for a small volume of sales to be made in months of low rates." [11] The logic of this conclusion lends weight to the further generalization that call loans are the effect of stock market activity rather than its cause.[12]

After a study of the day-to-day changes in interest rates and stock prices for the irregular period in the stock market from January to August, 1906, the bull market of 1908,

[11] Owens and Hardy, *op. cit.*, p. 41.

[12] *Ibid.*

and the bear market of 1910, Owens and Hardy conclude that (1) "an increase in the rate on call loans from one day to another did not characteristically cause a decline of stock prices," and (2) a "decrease in the call-loan rates was in a small majority of instances accompanied by an advance in security prices." When they compared day-to-day changes in call-loan rates and volume of sales, the results were entirely negative.[13]

The facts seem to establish conclusively that in so far as day-to-day and seasonal fluctuations in the prices of stock and in the volume of sales are concerned, call-loan rates are not a dominant causal factor. They do not warrant the conclusion that because there are no characteristic seasonal or day-to-day fluctuations in the prices and volumes of sales corresponding to the fluctuations in call-loan rates that, therefore, call-loan rates have little, if any, effect on the market. There may be other factors numerous enough and powerful enough to dominate the market with such frequency that the effect of interest rates cannot make itself felt with great enough frequency to establish consistent or characteristic seasonal and short-time fluctuations in the market. For example, if interest rates were one of five factors that powerfully affect stock prices, then interest rates could not dominate frequently enough to establish the principle that stock prices will rise when interest rates decline and, conversely, that stock prices will fall when interest rates rise, unless interest rates were many times more powerful than the other factors. The facts prove only that interest rates are not a dominating factor.

Interest rates and stock prices during cyclical movements. Those who hold the theory of the effectiveness of interest rates in the stock market use the same arguments in this connection that they put forth to support their belief in the seasonal effects.

Criticisms of this theory have of recent years come from

[13] Owens and Hardy, *op. cit.*, pp. 45-49.

different quarters. Many leading writers for financial papers have for some time objected to making interest rates a controlling factor. Economists are also beginning to object. The following editorial in the *Wall Street Journal* of July 15, 1924, expresses the point of view of many financial writers: "If dearer money does not reach stringency rates, stock will advance when other factors are favorable. If money is as cheap as it was in the years between the Panic of 1893 and the revival of 1896-1897, stocks will not advance. In the past 25 years there have been bull markets with stiff money rates and low money rates. In 1894 the Bank of England rate went to the irreducible minimum of 2%, and continued at that figure for nearly two years but no bull market was stimulated, although London had a boom in Transvaal gold shares in 1895. . . . Cheap money is a good bull argument on stocks only if the multitude of other influences are favorable."

The view that interest rates have little cyclical effect on stock prices is well presented in the studies of Owens and Hardy. Their conclusion is that interest rates are not a controlling factor in the stock market but are "only one of many factors which determine the course of prices in the stock market." Low interest rates are of no importance whatever in determining purchases of stock in order to get a margin between interest cost and dividends. In the case of a trader actively engaged in dealing in stocks, interest is a cost the same as commission charges and both are "probably of negligible importance." [14]

This conclusion would seem to assign even less weight to the influence of interest rates on stock prices than that allowed by the editorial quoted above. The facts upon which Owens and Hardy base their conclusion may be briefly summarized as follows:

1. From 1872 to 1922 there were 17 periods of 4 months or more duration of low call-loan rates, that is, below 3.30%, the median rate for the 50 years. During the same years

[14] *Ibid.*, p. 133.

there were also 17 periods of 4 months or more duration of high call-loan rates, that is, above 3.30%.

2. In 7 of the periods of low rates major bull movements began, and in 10 of the periods of high rates stocks began to decline. Three of the 7 bull movements did not begin until 19, 16, and 20 months, respectively, after the beginning of low interest rates. Five of the 10 declines under high interest rates began within 4 months after interest rates had become high but, in the case of the other 5, the intervals between the beginning of high rates and the decline in stock prices were 17, 7, 9, 6, and 8 months, in order, from the earliest to the latest interval.

3. During 4 of the 17 periods of low call-loan rates stock prices declined. The first of the 4 periods lasted 18 months and the last, 19 months. During 2 of the 17 periods of high rates stock prices continued to advance, the first 10 months and the second, 4 months.

4. There were 4 periods during which stock prices continued to advance under low call-loan rates, the last 2 of which ran on to 28 and 20 months, respectively. During one period, 1917-1922, high rates continued through 2 major bull and 2 major bear markets.

5. Stock prices were irregular during 2 periods of low call-loan rates and during 4 periods of high rates.

6. When the movements of interest rates on 4- to 6-month prime commercial paper were compared to stock prices, it was found that of 15 major advances in stock prices 7 began when interest rates were low and 8 when they were high. In 1895 the recovery was preceded by 15 months of low interest rates; the recoveries in 1918 and 1919 began and continued under high rates; and in 1891, 1903, and 1907 stocks began to advance before interest rates had reached their low points.

Furthermore, a study of the correlation between interest rates on 60- to 90-day commercial paper and industrial stock prices reveals a "pronounced tendency" for interest rates to move up and down with the prices of stocks, but such movement comes about 12 months later than the movement in stock prices. Low interest rates can thus not be the cause of high prices or high interest rates the cause of low prices.[15]

[15] Owens and Hardy, *op. cit.*, pp. 89-99.

These facts show that at one time the market advances under low or declining rates; at another, it advances under high and advancing rates; and at still another, it falls or fails to advance for many months under low rates. The only conclusion which the authors can draw is that no controlling relationship appears between either call-loan rates or commercial paper rates and stock prices.

Moreover, this conclusion is to be expected because a trader or investor in stock hopes to profit by price advance and not by differences between low interest rates and relatively high dividends. The spread between the high and low points in the Dow, Jones averages each year amounts to 37 points per year. An investor for the long swings expects to make 25 to 50 points per share over a period of 2 to 4 years. "To buy stocks simply because interest rates are low is a very risky business. Prices of stocks declined in 1901, 1910, 1911, 1914, and 1917 though interest rates were low."

Professor Warren M. Persons and Mr. Edwin Frickey place considerably more emphasis upon the effect of interest rates on stock prices. They put emphasis not so much on the effect of low or high rates of interest as on changes in the rates. Persons and Frickey, after summing up in an extended article the results of their studies on the relation of short-time interest rates to security prices, conclude as follows: "The chief conclusion of this study is that substantial quantitative changes in money rates, regardless of length of time during which those changes take place, have been, in general, highly significant for security markets." [16] On a previous page the position of the Harvard people was put in a somewhat positive manner as follows: "It is evident from these quotations that the Harvard Committee holds the theory that, in general, the money market exercises great influence upon both speculative and business developments, and that short-time money rates provide an

[16] *Review of Economic Statistics*, January, 1926, p. 46.

index which cannot be neglected in appraising these developments." [17]

In the first place Mr. Persons found that short-time interest rates lagged, on an average, 12 months behind stock prices; that is, on an average, interest rates reached their peak and turned down 12 months after stock prices reached their peak and turned down. The same period held for the average lag of interest rates at the low points.

In this connection Persons and Frickey deny that the fact that interest rates lag behind stock prices proves that variations in interest rates are an effect and not a cause of the variations in stock prices. Because the factors of one cycle lead into the next, changes in interest rates coming as the last of the three important elements in the cycle movement would be expected to influence materially the factor that moves first in a succeeding cycle, that is, stock prices.

Further studies revealed the fact that from 1884 to 1914 a rise in adjusted short-time interest rates of 1¼% accompanying expanding business from a previous low regularly indicated that stock prices were at or near their highest level before a decline, and, conversely, that a decline in adjusted interest rates of 1¼% accompanying declining business indicated that stock prices were at or near a turning-point upward. The same relationships held for bonds except that in this case the adjusted short-time interest rate advanced or declined only 1% to give an indication of a turn in bond prices.[18]

Conclusions as to the effect of call-loan and short-time interest rates. The Harvard University Committee on Economic Research carefully developed three series of indexes, the first representing speculation on the Stock Exchange; the second, business; and the third, money conditions. When these series are charted, the business curve is found to lag

[17] *Ibid.*, p. 29.

[18] *Ibid.*, p. 46.

on the average, for the years 1903-1914, about 8 months behind the curve representing speculation; the curve representing money conditions lagged on the average 4 months after the curve of business conditions and 12 months after the curve of speculation.

It is a curious fact that throughout economic discussion great weight has been placed on interest rates as determining stock prices and relatively little has been said about the effect of business conditions upon the market.

There can be no question but that the rise of the interest rate curve following the advances in the speculation and business curves is very largely the result of the increased use of funds on the securities market and in business.

It is also a fact that the activity of the market and the rise of prices, though starting while money is cheap, make the most of their increase after interest rates begin to advance and do not reach their peak until interest rates have made a very material advance, considered in terms of percentage of the previous low. The market is never high in volume of sales nor prices when interest rates are low. These facts are so regular in their recurrence and have so few exceptions, if any at all, that they may be said to be characteristic of the market. The fact is that people buy the most shares and pay the highest prices at the time interest rates are relatively high and, on the other hand, the market is less active and prices are low at or near the time when people can borrow money most cheaply.

Now, these facts cannot be held to prove that interest rates do not have any influence on the market, but they do furnish excellent evidence that there are influences at work in the stock market, other than interest rates, powerful enough to dominate whatever effect interest rates may have. These powerful factors may be classed as the business factors which are represented by the business curve of the Harvard Index Chart. In other words, changes in business conditions are the dominant factors in changes in stock market activity and stock prices.

It may be, however, that at the beginning of a major advance and again at the peak interest rates come to the front in the race for influence. For example, most major advances began while interest rates were relatively low or were rapidly declining, as is shown in Owens and Hardy's figures. But are not interest rates at least as potent as other factors in their effect on prices? It is not probable, for when business does not recover for many months during a depression period, the stock market will not begin a major advance even if interest rates are low. For example, call-loan rates were below 3.30% from May, 1874, to October, 1875, about 18 months, with the stock price averages lower at the end of the period than at the beginning. Again, interest rates were low throughout 1911 and the first part of 1912, but the stock market did nothing until after the business curve began to advance. In other words, low or declining interest rates do not make the stock price averages begin a major advance unless business is in proper balance and profits are in sight. Cheap money may then be an additional factor in starting a bull movement. Money will flow first into bonds and later into the best stocks, providing business conditions are favorable.

At the peaks usually prices of stocks begin to decline before interest rates begin to fall. Is this decline due to interest rates? More probably it is due to a business situation that has gotten out of adjustment and a technical situation in the stock market that calls for correction. Difficulty of borrowing money may here be a factor in hastening the beginning of the decline. However, fear of loss due to a sudden break in a top-heavy situation is a far greater factor in the decline. Moreover, a bull market may begin and run its course under high rates as was true in 1917-1918 and again in 1919. The business factors were here so powerful that the market went up regardless of any depressing effect of high interest rates.

The ineffectiveness of money rates alone to cause the

price of stocks to advance is well illustrated by a comparison of different individual stocks. The great copper stocks like those of Anaconda and Kennecott have made very little advance in the last two years. Anaconda was high at 51 in early 1925, declined to 35¼ in April, advanced to 53¼ in November, 1925, then dropped to 51 on February 9, 1926, and to 41½ on March 30. On August 10, 1926, the price was up to about 51. Kennecott was low at 47 in March, advanced to 59 in November, 1925, declined to about 50 on March 30, and advanced to 58 on August 10, 1926.

The Dow, Jones industrial stock price averages were high at 125.68 on March 6, and low at 115 on March 30, 1925. From this point the advance went to 162.31 on February 11, 1926; a decline to 135.20 on March 30, and a rise to 166.64 on August 14.

It thus appears that during the period from March, 1925, to August, 1926, the averages have advanced 40 points over the high of 125.68. During this time the best copper stocks have barely held their own. About the same is true of the great oil stocks. The railroad equipment stocks have fallen much behind their highs of early 1925. The fact of the matter is that the coppers, the oils, and the equipments were not prosperous like the motors, steels, electrical equipment, and public utility stocks.

We cannot avoid the conclusion that the factor of interest rates can have little, if any, effect on the stock market unless conditions that may be summarized under business factors are such as to warrant increasing earnings on the part of corporations whose issues of stock are on the market.

But does the interest factor have any effect at all? Is it not simply a result of business and stock market conditions on the one hand, and gold reserves on the other? If the stock market situation is due to business conditions, are not these conditions the effect of money conditions and so, after all, money conditions basic to the stock market?

To this last question we may reply that the relations between business and interest rates are just as irregular as the relations between stock prices and interest rates. For example, prices and business activity are high when interest rates are high and low when interest rates are low. Again business prosperity may begin and continue in a period of high interest rates or business may not begin to recover for a relatively long time though interest is low. The conclusion of these facts is that interest rates are not a dominating factor in business prosperity. Other factors, like efficiency of management, efficiency of labor, scarcity of goods, and a balanced price system are much more important; and as long as these do not obtain to a large degree, interest rates may be low and money plentiful but business will not forge ahead.

The fact that an advance of interest rates on short-time commercial paper of 1¼% is followed at once or soon by a decline of stock prices does not necessarily lead one to conclude that "substantial quantitative changes in money rates . . . . have been in general highly significant for security markets." The more probable conclusion is that since interest rates lag behind business and move relatively slowly until business and the stock market have progressed far along in their cycle, a substantial advance of interest rates will indicate a situation in business that is getting out of balance and a technical position of the market that will relatively soon call for readjustment in stock prices.

Now let us turn to the question as to when interest rates do make a difference. In the first place, floor traders and traders for the day-to-day fluctuations in the market, though they may close their transactions at the end of each day and have no interest to pay, watch interest rates and the reserve position of the banks because the calling of loans may cause selling of stock on the market and the fall in prices will wipe out their gains on long stock. Again, at times a rising call-loan rate may indicate a temporary over-

bought condition which will cause a drop when the longs get scared by some unexpected unfavorable happening. "Call money eased off to 3½% in the early afternoon, compared with a renewal rate of 3¾%. This easement heightened the spirit of confidence prevailing in the financial community, and stocks continued to act impressively in the early afternoon." [19]

"Reports from the floor of the Stock Exchange received by a number of the leading wire houses and flashed all over the country were to the effect that indications pointed to another flurry in call-money rates, with predictions being made that a 5% charge would again be effective. This caused some hesitation in the market for a time, due to fear that another selling wave might be started when higher money rates became effective." [20]

"In the afternoon the upward course of prices received a check from a run-up in call money to 5%, caused by calling of about $40,000,000 in loans by Clearing-House banks as a result of the $35,000,000 decrease in surplus reserves shown by Saturday bank statement. But the irregularity which developed from the money flurry gave the general list opportunity to show its fundamental strength." [21]

These illustrations show what Wall Street thinks of the day-to-day effect of interest rates. This effect may be overcome by other factors and, therefore, may not register in the statistics. Owens' and Hardy's studies do not deny that there is some effect on day-to-day prices, for during a year of bull market, a year of bear market, and 8 months of an irregular market, on days when the call-loan rate advanced 85 days had an advance in the price of stocks but 90 days had declines in stock prices. Again, on the days when call-money rates declined, 103 days had a decline in prices but 79 had advances. These figures may mean that on some days favorable and on other days unfavorable factors af-

[19] *Wall Street Journal,* May 9, 1925.

[20] *Ibid.,* August 12, 1926.

[21] *Ibid.,* February 25, 1925.

fected the market. They may, however, also mean that interest rates had their share of effects.

Owens and Hardy have shown that there is nothing to be gained from using seasonal cheap money if the difference between the dividend and the rate of interest is the object sought. If, however, the market is rising and appears a first-class risk, will not the fact of cheap money supplement the other favorable elements of the situation? Again, if the market is already due for a decline, will not high or advancing interest rates be an additional weight on it? In judging the market, many factors must be considered, and when credit is easy and will remain so, one of the uncertainties is eliminated; and, moreover, when business is good, tending to drive stock prices up, the continuation of cheap interest rates is evidence that business has not overreached itself.

In the cyclical variations of the market the same argument holds. Advances of interest rates within certain limits do not trouble long-swing traders because such advances are merely signs that a healthy growth of business is going on. When business conditions are sound and corporations are making profits, a period of easy money ahead aids to create a feeling of buoyancy and confidence in the market that cannot exist without having some effect on buying in the market.

We then conclude that money conditions are but one of many factors that affect the market. They are not a dominant factor. Cheap money may lend an added strength to a bull market, dear money may add weight to a heavy market; but high interest rates cannot stop a bull market unless other conditions are unsound, and cheap money cannot start a recovery unless fundamentals are favorable. In either case, the effect is secondary and supplementary in nature.

XXVI

FORECASTING THE MAJOR TRENDS

The methods of the Babson Statistical Organization. The methods of the Harvard Committee on Economic Research. The Brookmire barometer. Forecasting by Moody's Investors Service. The use of business barometers. Simple barometers of security prices. Common-sense methods. Constructive investing.

THE investor in stocks is especially interested in the cyclical fluctuations in stock prices. Since he buys only the high-grade stocks, he expects to profit, in addition to dividends, by buying when stocks are low and selling when they are high. The ability to judge the long-time movements in stock prices is thus probably more important than any other factor that affects the particular stocks in which he deals.

The business man who desires to buy into a relatively new company because he believes in its management and feels confident that the business has a prosperous future like the investor should be guided in his action by a careful study of the stage of the business cycle. If the revival phase is about to begin and the company has weathered the depression, he may be quite safe; but if the liquidation and depression periods are just ahead, great caution is needed. The day-to-day trader is only indirectly interested, but the trader on the minor swings needs to know the cyclical trend.

It is the purpose of this chapter to give an explanation of several methods of forecasting the business cycle. Since the stock price cycles correspond closely to the cycles in business, and are the effect of the movements in business, it is important to forecast business. If one knows what business is about to do, one can be fairly sure of the position of the major swings of stock prices.

There are several types of business forecasting tools or

machines the same as there are several types of internal combustion engines or aeroplanes. One of these forecasting mechanisms depends on the theory that action and reaction about a normal are equal. When a curve representing actual business is plotted and a second line representing normal business is drawn through the variations in the first curve, the areas above and the areas below the normal line must be equal.

A second type of forecasting machine is based on the theory that certain factors in the whole economic situation move before certain other factors, that is, some factors lag behind other factors and do it so regularly and consistently that they can be depended upon to always maintain more or less the same time relationship among each other. Now if the factors that move first, those that move second, and those that move last, can be isolated and an index of this movement constructed, it is possible to construct a chart composed of the three curves, each forecasting the other. That is, when the curve representing the factors that move ahead of all other factors begins to move upward, some time later the curve representing the factors that lag in their movement will also begin to move upward. At the top when the first curve turns downward, it will soon be followed by the second and then the third. A forecasting chart of this type is based on the theory of lag among the important factors in every business situation.

A third type depends on a single forecasting curve. When the curve turns up, business will later improve, and when it turns down, business actively will decline. This forecasting curve is supposed to represent in graphic form the changing relations of business with reference to a normal. When the index representing business declines below the normal, the forecasting line will begin to curve upward, showing improvement ahead; when the index of business advances above a proposed normal, the forecasting line is made to begin a downward curve, indicating a decline.

A fourth type of forecasting device depends upon a fixed amount of change not from a normal, but simply a change from a previous low or high no matter what the low or the high was with reference to a normal curve or index number. For example, after interest rates rise a given amount from a previous low, stock prices are about to begin to fall. Again, after a fixed number of months after pig-iron production has reached its low point and begun its recovery, security prices begin to decline.

Each of these types of business barometers has its advocates and claims. It is not our purpose to criticize the different barometers. It is the aim here merely to explain each type and show how it is used.

THE METHODS OF THE BABSON STATISTICAL ORGANIZATION

Roger W. Babson is one of the pioneers in establishing a system of forecasting the major movements in business. His work has for many years been recognized as of very great value by many business men whom he has taught the need of carefully collected and interpreted information. The essentials of the system of the Babson Statistical Organization are given in the following paragraphs.

1. *Comparative and fundamental statistics.* Statistical data on business matters may be divided into two classes, first, comparative, and second, fundamental statistics. Comparative statistics are those figures which represent the internal situation of a given business. For example, the data given in the financial and income statements and the facts pertaining to the details of equipment and operation are comparative statistics. An investor uses comparative statistics to aid him in selecting the particular company whose securities he is willing to buy as good investments.

On the other hand, fundamental statistics refer to the broader conditions outside any particular plant or business. They apply to the general economic forces which form the

broad background in reference to which the individual plant must operate; for example, prices, wages, labor supply, supply of raw materials, interest rates, purchasing power of customers, political conditions, and foreign relations. Every business is affected by these fundamental economic forces and must adjust itself to them.

When fundamentals are right, business generally is prosperous; when they are subnormal, business generally is depressed. A study of major movements in business and in investments then resolves itself into a study of fundamentals.

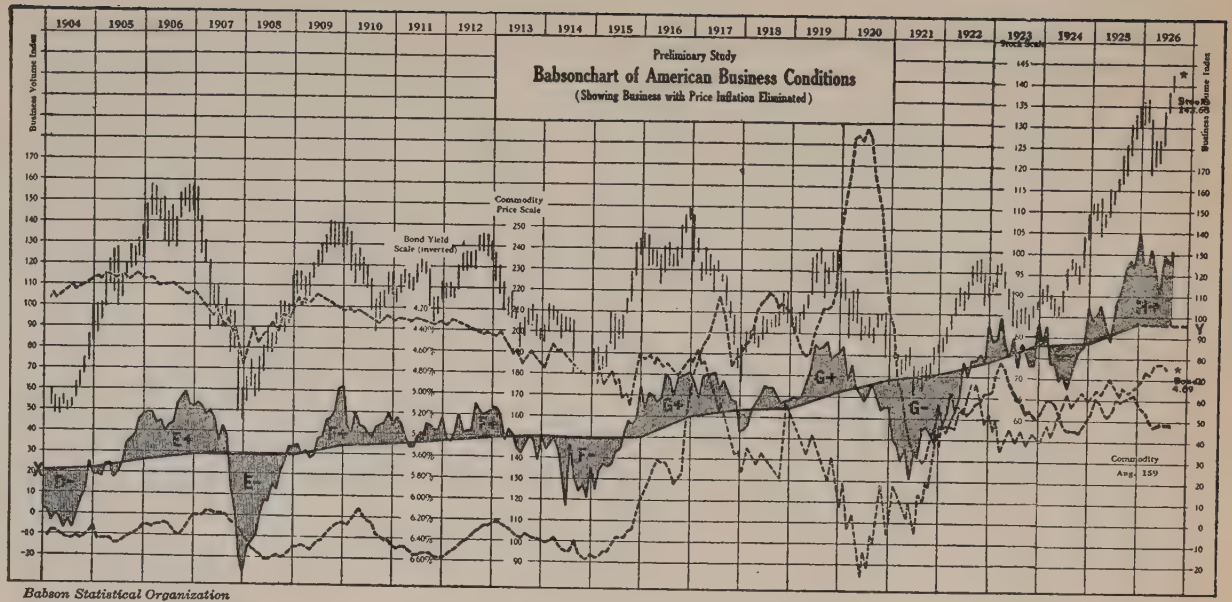
Babson finds many fundamental factors which he classes under 12 heads and these 12 classes are again classed under 3 main groups. These groups and the classes of data are as follows:

Mercantile Conditions	*Monetary Conditions*	*Investment Conditions*
New Building	Commodity Prices	Yield of Leading Crops
Failures	Foreign Trade	Railroad Earnings
Check Transactions	Foreign Money Rates	Stock Market Conditions
Immigration and similar subjects	Domestic Money Rates and similar subjects	Canadian Conditions and similar subjects

2. *The business value and business volume indexes.* The principal piece of apparatus used by the Babson Organization as an aid to its forecasts is the Babsonchart. This chart has two forms: one uses value data and the other uses volume figures. In recent months only the deflated or volume chart has been published. In Figure 16 is presented the volume chart for September 28, 1926.

The outstanding features of the chart are the comparatively regular *X-Y* line, the shaded areas, and the very irregular line which bounds the areas. This irregular line is the curve which results from plotting Babson's business volume index or, in case of the business value chart, the business value index.

The fundamental data used in making the business value index are new building, crops, check transactions, immigration, total foreign trade, money rates, business failures, commodity prices, railroad earnings, stock prices, and an



Babson Statistical Organization

Figure 16; The deflated Babsonchart aims to represent the total volume of business expressed in terms of physical units.

index of Canadian business conditions. The business volume index includes check transactions, business failures, pig-iron production, new building, domestic and foreign money rates, volume of foreign trade, railroad earnings, crops, stocks traded, and an index of Canadian business conditions. When these items can be had in terms of dollars only, they are deflated and are corrected for price changes.

The indexes of value and volume are both computed by means of a scale table using 1901-1911 as the base period.[1]

3. *The law of equal areas.* When the business value curve has been plotted, it shows a more or less regular wave-like motion. The problem is to interpret these up and down swings with reference to the future. Babson found in physics the law that action and reaction are equal. He found somewhat similar phenomena in chemistry. The philosophers talk of a law of rhythm or a law of compensation in operation throughout the universe. Why should this law not hold in the field of business? For Babson it does. The law of action and reaction is fundamental. It is so accepted without statistical proof.

This law gives the key to the interpretation of the swings of the business value and volume curves. The best method of representing the law on a chart is to draw a line through the business curves so that the areas above and below are equal. That is, the law of action and reaction is best represented on a chart by equal areas above and below a normal line, the boundaries of the areas being the business curve. The method of drawing the normal line is the next problem.

4. *The X-Y line.* The *X-Y* line represents the country's net gain or growth. In more technical terminology, it represents the line of secular trend. In the Babsonchart representing business value, it takes a fairly regular upward trend to 1916 when it becomes very irregular. In the deflated

[1] For a description of the scale table, see Babson, Roger W., *Business Barometers,* Sixteenth Edition, pp. 132 ff.

Babsonchart representing the volume of business the line has a fairly regular upward trend to the present time.

Since the trend of the net growth of the country was found by Babson's study to be better represented by the trend of bank clearings than by any single fundamental factor, bank clearings and, since 1918, check transactions, outside of New York, have been made the basis of the *X-Y* line.

In beginning the line the first step was to plot the business value curve for 1905 to 1908. Next the bank clearings outside New York for 1905 were taken as a base and on this base the percentage of increase for the years 1906, 1907, and 1908 were found. When these percentages were plotted and the line placed on the business value curve for 1905 to 1908 so as to make the areas above and below the line equal, it was found that the line started at 24 in 1905 and advanced to 27 by 1908, an increase of 3 points in the index. On the other hand, the bank clearings increased 6% during the period. This meant that the *X-Y* line advanced one point on the scale to a 2% advance in clearings. Since the 1905-1908 period, the *X-Y* line has been drawn on the basis of an upward trend of one point on its scale for 2% advance in the bank clearings over the previous year.

At the beginning of each year, since the check transactions, now used, cannot yet be known, a horizontal line is drawn from the end of the *X-Y* line of the year just closed. At the close of the year the check transactions are known and the *X-Y* line can be drawn tending upward by one-half the percentage that adjusted check transactions have increased over the previous year or downward by the same ratio if there was a decline in check transactions. This is done year after year to the end of the cycle when the *X-Y* line is adjusted according to the law of equal areas, that is, the *X-Y* line is drawn so as to make areas above and below equal.

5. *The use of the Babsonchart.* Since areas above and

below the *X-Y* line must on the long run be equal, if an area above the *X-Y* line has developed, then the near future must develop an area of equal size below the line. If a large area has developed above the *X-Y* line, then a large area must develop below it. Since the area is the product of intensity by duration, if the depression that follows prosperity is very severe, the depression will not last long; but if the decline is not intense, then it must last a long time to make up the required area.

It must be noted that there is no way of forecasting from the chart the size of an area above the *X-Y* line. Thus, the chart does not enable one to forecast the size of area *H*+ except indirectly by comparison with other areas above the line. When, however, area *H*+ is completed, a depression will follow until the area *H*− equals *H*+. When area *H*− is about completed, area *I*+ is about to begin, but its period of duration and intensity must be forecast outside the law of averages by other means than the Babsonchart.

6. *The Babson business dial.* In its attempt to be as specific as possible as to the current phase of the business cycle, the Babson Statistical Organization has constructed a business dial, shown in Figure 17, which indicates the sequence of events of a typical cycle. The sequence of events is as follows:[2]

It is not claimed that this sequence is absolutely fixed but it is typical. A careful study of events as the cycle proceeds will enable the observer to locate a given time in the cycle and to predict with reasonable assurance the next phase.

Babson realizes that the best machinery for forecasting must be constantly checked by experience and a careful study of individual industries as well as an analysis of the general situation. It is part of his theory that different industries have their own cycles so that an industry may be starting liquidation while others are still in the prosperity phase, or, again, certain industries may be in the recovery

[2] Babson, Roger W., *Business Fundamentals,* p. 60.

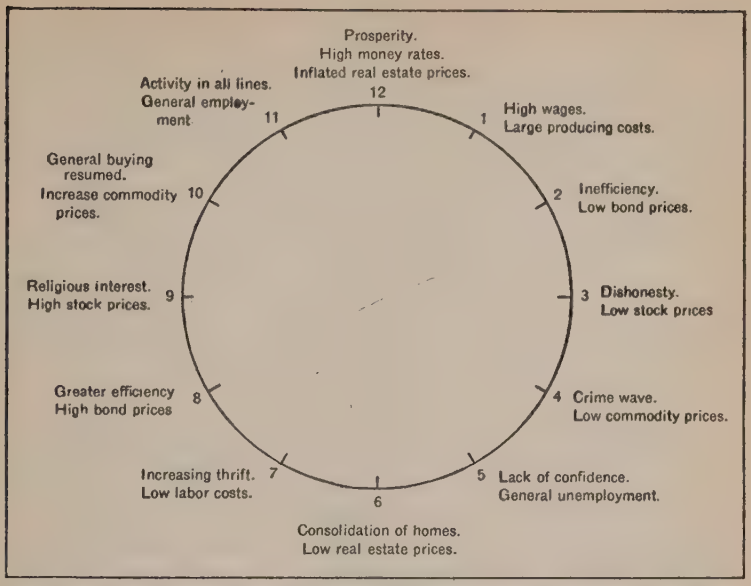


Figure 17: The business dial constructed by the Babson Statistical Organization to characterize the phases of the business cycle.

while others have not fully liquidated. A special study must thus be made of each industry before a final opinion can be given as to the cycle. Many factors must be considered together with the Babsonchart and the Babson business dial before barometric conclusions can be announced.

The stock market has a very definite relationship to the business cycle. The high points of the prices of stocks have usually come in the early part of the expansion period and the low points in the early part of the period of depression. High bond prices have usually come near the end of the period of depression and low bond prices near the end of the overexpansion period.

Babson does not aim to forecast any but the major cycles. It is a mistake for either business men or investors to attempt to operate on the short swings which cannot be forecast with any degree of assurance. The Babson organiza-

tion is at present experimenting with some of the more up-to-date statistical devices with a view of improving upon their present methods which have been used for many years. If these newer statistical methods are found to give better results than those now in use, the public will be given the benefit of a better service.

THE METHODS OF THE HARVARD COMMITTEE ON ECONOMIC RESEARCH

In making correlation experiments with the leading series of fundamental economic data, Mr. Persons more than 10 years ago found that certain series of data correlated best with other basic series when they were lagged. For example, when stock prices were correlated with commodity prices, year for year, the correlation was not very high; but when stock prices were lagged or set back a year, the correlation became very significant. This meant that the series which had to be lagged a year could be used as a forecaster of the series with which it was compared.

By means of such correlation experiments Mr. Persons found three groups of fundamentals, one which might be called the business group, one which ran earlier than the business group, and one which lagged behind the business group. These last two groups were called speculative and money groups respectively.

These earlier experiments were based on annual data. Results thus obtained were not sufficiently accurate. Later studies were based on monthly data. These studies confirmed the earlier conclusions and gave more exact time correlations.

In contrast to the Babson theory of the equivalence of action and reaction expressed by equal areas above and below a line of normal growth, the Harvard barometric system is based on the theory of the correlation of the different fundamental series of data, some series forecasting others.

1. *Four components of each series of statistics.* Many series of fundamental statistics have (*a*) a secular trend, (*b*) a cyclical movement, (*c*) a seasonal movement, and (*d*) incidental movements. The secular trend represents the long-time trend of growth. For example, pig-iron production has had a general upward trend due to increased need and better facilities of production accompanying the growth of population and invention. The cyclical movements are the three- to four-year swings in the curve which represents any fundamental series. It is this movement that the forecaster studies. It is the business cycle. Seasonal variations apply to the increases or decreases due to the changes in seasons. Incidental variations are changes due to temporary events like strikes, earthquakes, fires, sudden political upheavals, and other irregular occurrences.

Now since the cyclical movements are the objects of special interest in forecasting, it is important that the secular trend and seasonal fluctuations shall be eliminated from each series so that the cyclical variations of any series stand alone and can be correlated with those of any other series. Moreover, the data of the same series at different periods are not comparable. A given production of pig iron might represent boom times 20 years ago, but today the same tonnage would surely mean that a depression is on. It is only as the normal growth of the industry is eliminated that the figures which represent the cycles are comparable.

Seasonal variations do not mean much in some series but are very significant in others. The figures for the latter series must be corrected for seasonal variations or they will not properly indicate the movement of the cycle.

2. *Correction for secular trend.* The Harvard Committee has developed carefully tested mathematical methods for the elimination of the secular trend.[3] What may be called

[3] Any one interested in the technical process of the elimination of the secular trend may consult the *Review of Economic Statistics,* preliminary Volume I, 1919. Persons, W. M., "A Non-Technical Explanation of the Index of General Business Conditions," *Review of Economic Statistics,* Vol. II, 1920, pp. 39-48; Vanderblue, Homer B., *Problems in Business Economics,* A. W. Shaw Company, Chicago.

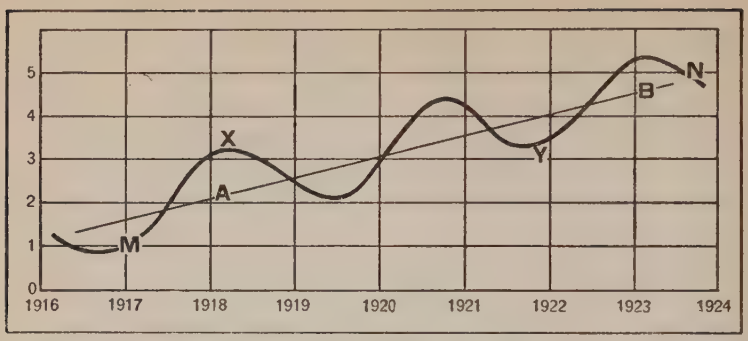


Figure 18: Illustration of secular trend. The curve *MN* is drawn without reference to actual conditions.

the "straight line" method is used and consists of drawing a straight line through a curve representing the series of data under examination so that the straight line shall fit in the best possible manner all the items of the series. This line then becomes the base for any item at any given date. A production of 10,000,000 tons of a given raw material in 1900 may represent prosperity because the corresponding date on the secular trend line represents only 8,000,000 tons. Again, in 1924, 20,000,000 tons of the same commodity may represent a period of depression because this figure falls much below the 25,000,000 tons indicated by the trend line. In Figure 18 the line *A-B* illustrates the secular trend of the curve *MN*.

In Figure 18 the point *Y* represents a period of depression though higher than the point *X* which indicates prosperity. These points are significant only in reference to the line of trend as far as the business cycle is concerned.

When, now, the line of trend is eliminated, the result is practically the same as if the line *AB* were a horizontal line with the curve *MN* drawn about it. The line *AB* might then be marked zero and points above +1, +2, +3, and so forth, and those below —1, —2, —3, and so forth, as in Figure 19.

3. *Elimination of the seasonal variations.* After the secular trend has been eliminated, the data must be corrected

for seasonal variations. Suppose the index of a series of figures corrected for secular trend shows a rise from February to March of a given year. Does this mean that this rise is the effect of the broader forces of the business cycle or is it due simply to a spring increase in business? If the rise is greater than the regular spring increase, then the cycle is for the time being, at least, on the upward trend; if less, then the cycle has a depressing effect. To get a true picture of the cyclical movement, therefore, seasonal fluctuations must be eliminated.

The method used by the Harvard Committee is known as the "link relative" method. Each month of the year is compared with the preceding month for the given series of data over a period of years and a percentage found which is thought to represent most nearly the seasonal increase or decrease in any given series of items from one month to the next. For example, if iron production increases from February to March so that the expected production in March is 110% of that of February, then there is a seasonal increase of 10% from the first month to the second. If now in any year the production in March over that of February should amount to 120%, then the cycle accounts for the increase above 110%.

But the degree of prosperity or depression of one industry as compared with that of another is not brought out by the use of absolute figures. For example, the production of a given raw material of 1,500,000 tons, when the secular trend

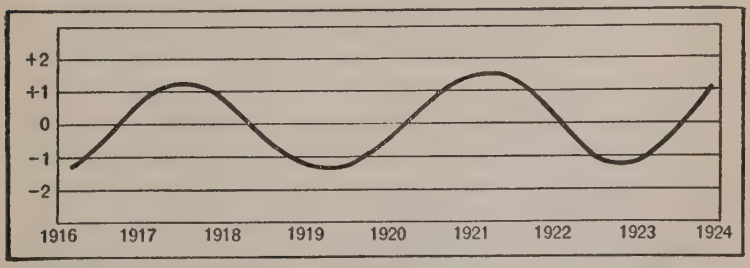


Figure 19: Illustration of the curve *MN* of Figure 18, with the secular trend eliminated.

indicates a normal production of 1,000,000 tons, indicates a much greater degree of prosperity than the production of 2,500,000 tons in some other industry when the normal is indicated at 2,000,000 tons. Before several different series can be combined into a composite, the differences in the different fundamental series corrected for secular trend and seasonal variation, must be reduced to some common denominator. This is done by finding the standard deviation of each series and dividing the variations of the items above and below the line of secular trend by the standard deviation. These results can then be combined with similar results, obtained from other series into an index. This index can be plotted about the horizontal line designated by zero.

4. *The Harvard Monthly Index Chart.* After the different series of fundamental data have been corrected for secular trend and seasonal variations so that only the cyclical factors remain, the next problem is to select those series whose movements correspond to the business group, those whose movements precede the business group, and those whose movements follow it in point of time. This is done by finding the coefficient of correlation of the different series as compared to wholesale commodity prices as a base series. First, each series is compared month for month with the commodity price series; next, it is lagged 2 months, 3 months, 4 months, and so on; finally, each series is advanced 2 months, 3 months, 4 months. At each position the coefficient of correlation is found. Those series which show the highest degree of correlation when compared month for month with the base series constitute the business group; those that show the highest degree of correlation when lagged constitute the speculative group; and those that must be advanced constitute the money group.

Next an index number must be made for each group. Experiments have shown that an index for two series of figures selected from the speculation group make an index practically identical with an index computed for the whole

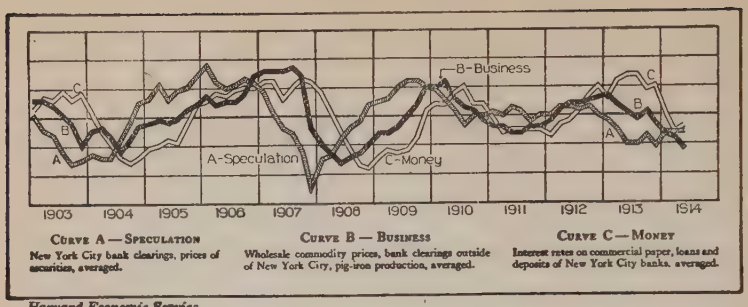
group. The same was found true of the business and money groups. In other words, an index based on New York City bank debits and the price of industrial stocks gives about the same results that are obtained from an index based on a half-dozen or more series that fall in the speculative group; bank debits for 140 cities outside New York and wholesale commodity prices serve for all the fundamental series that fall into the business group; and rates on prime commercial paper and 90-day and 4-month time money serve for the money group.

The process of making the index of speculation is as follows: (*a*) correction of each of the two series used for secular trend by the "straight line" method, (*b*) correction for the seasonal variations in each of the two series, (*c*) reduction of each series to an index by the use of the standard deviation as a common denominator, (*d*) the average of the indexes of the two series.

The business and money indexes are constructed in exactly the same way as the speculative index. The monthly index chart is constructed by plotting the three series of index numbers on the same chart so that the relative position of the three curves may be easily observed.

The period 1903-1914 was used as a test period for the study of the relationship of the three curves based on monthly data. In Figure 20 is given the monthly index chart for the test period.

5. *Interpretation of the monthly index chart.* An examination of Figure 20 will bring out the following points: (*a*) the speculation curve makes its major turns, whether upward or downward, on the average 6 to 10 months ahead of similar turns in the business curve; (*b*) the business curve makes its major turns in advance of those of the money curve by 4 to 6 months; (*c*) a persistent rise of the business curve for a period of time accompanied by a similar rise in the money curve will regularly be followed by a decline in the speculation curve, that is, security prices and



Harvard Economic Service.

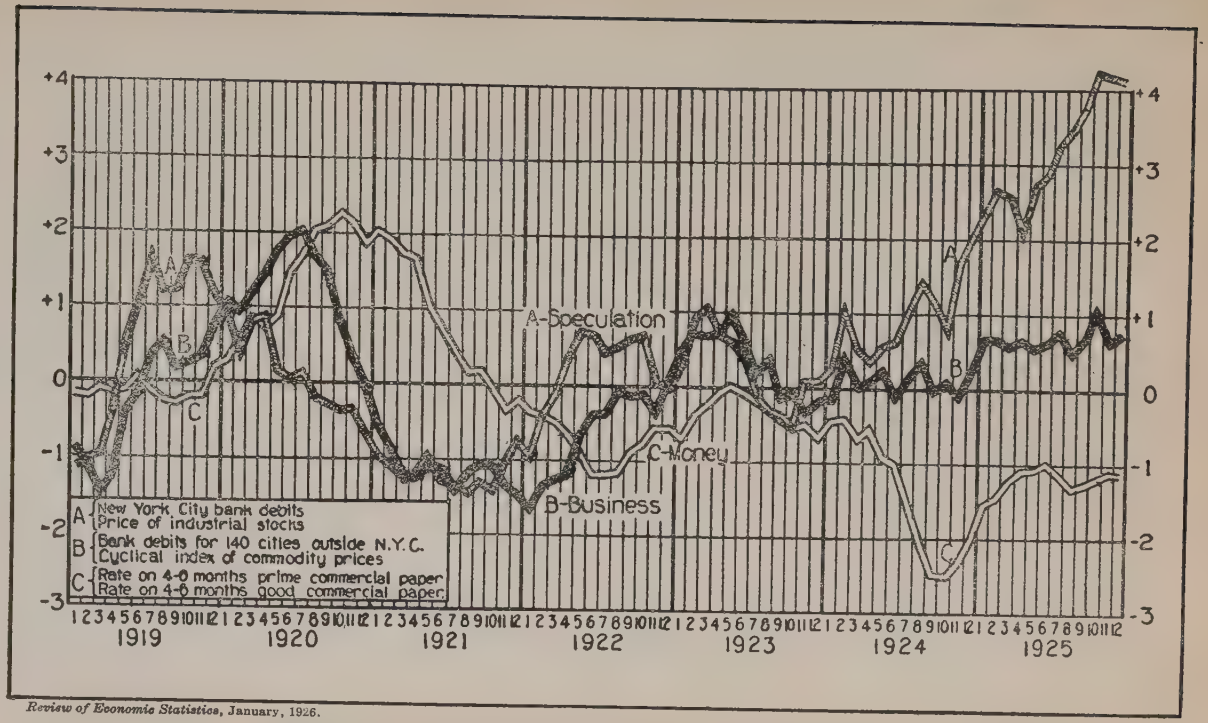
Figure 20: The Test Period Index—1903-1914.

stock market activity; (*d*) a persistent decline over a period of time of the business curve followed by a decline of the money curve forecasts a turn for the better in the security curve.

There is here an unfailing sequence of events that furnishes a means of forecasting. The items taken into consideration in making the forecasts are: (1) the width of the movements of the curves, that is, the size of the movements; (2) the relative position of each curve with reference to the other two curves; and (3) the regularity of the sequence in movement of the curves, that is, the speculative curve moves first, the business curve next, and the money curve last, at their cyclical turning-points.

The methods of interpreting the monthly index chart may be illustrated by the use of the period 1919-1925. In Figure 21 is given the monthly index chart for this period.

In the monthly index chart (Figure 21) curve A, speculation, had made a record advance accompanied by a similar record advance in curve B, business, and curve C, money. The stage was therefore set for curve A to turn down. This came in November, 1919. The turn, considering the phenomenal advance made in curve B and a considerable advance in curve C, was a forerunner of a turn in curve B by six to ten months. This turn came in the middle of 1920, followed several months later by a turn in the money curve.



Review of Economic Statistics, January, 1926.

Figure 21: The Harvard Index of General Business Conditions.

After a long and constant drop in curve A accompanied by a like decline in curve B and a substantial decline in curve C, according to the rules of the relation of the curves, the speculation curve should turn up followed some months later by the business curve, both curves making their turn for the better before the money curve had reached its low point.

The monthly index charts are supplemented by weekly index charts which show the weekly movements of stock prices, money rates, commodity prices, the number of shares traded on the New York Stock Exchange, the bank debits outside New York City, and the volume of bank credit extended. Other important supplementary indexes used are indexes of manufactures of basic materials, of manufactures of consumption goods, of all manufactures combined, indexes of revenue, freight-car loadings, an index of the physical volume of trade, indexes of department store sales and stocks, indexes of commodity prices, indexes of building conditions, and indexes of money and credit conditions.

The forecasts based on the index charts are checked against all the supplementary indexes before a final forecast is announced. The Harvard people realize that no mechanical device can be considered final. Such devices are the basis of forecasting, however, and when supplemented by indexes of carefully selected fundamental data the results should be substantially correct.

THE BROOKMIRE BAROMETER

The first business barometer based on the theory of the sequence of fundamental economic developments was that of the Brookmire Economic Service. Mr. Brookmire combined the fundamentals of business into, first, a banking group, second, a speculative group, and, third, a business group. He began the cycle with the banking factors as the forerunners of the speculative factors which, in turn, pre-

ceded in time the business factors. This sequence differs from that of the Harvard service in that for the latter service the speculative factors begin the cycle followed in order by the business and money factors.

The present Brookmire organization has largely given up the theory and also the methods used in the original Brookmire barometer. They criticize the old Brookmire barometer along with that of the Harvard people as being defective in that in the first place neither makes it possible to distinguish minor fluctuations in the graphs from major ones for some months and, in the second place, both barometers lose their significance when there is a sharp change in the trend of some leading factors, for example, commodity prices.[4] In the recent reconstruction of the Brookmire barometer the correction of these two defects has been the special aim.

1. *No single barometer adequate.* The Brookmire people publish several different barometers, believing that no general business barometer can fill the specific needs of different types of business men. We find, therefore, a number of Brookmire barometers. Of these the investor is most interested in the barometer of commodity prices, the barometer of industrial stock prices, the barometer of railroad and public utility stock prices, the barometer of bond prices, and the business index.

Each barometer is made for a specific purpose, for example, the barometer of commodity prices is constructed with the object of its use as a forecaster of commodity prices. In the selection of the series to be used in constructing each barometer no attention is paid to selecting factors that are homogeneous as to their time of movement; for example, the speculative, business, and money factors of the Harvard service. Rather, the factors to be used in the construction of any barometer are selected with reference to their bearing on the purpose of the particular barometer.

[4] Vance, Ray, *Business and Investment Forecasting*, 1925, pp. 81-82.

Thus the factors used for the barometer of commodity prices are: (*a*) the commercial paper rate, (*b*) the turnover of bank deposits, (*c*) the volume of production in basic industries, and (*d*) the import-export ratio. For the barometers of stock prices, stock prices and speculative activity are used in addition to the four factors employed for the barometer of commodity prices. The barometer of bond prices is based on (*a*) the prices of stocks, (*b*) the general level of commodity prices, and (*c*) the commercial paper rate. The index of business is a composite of (*a*) the physical volume of production of commodities, (*b*) the volume of distribution of commodities as indicated by railroad traffic, (*c*) the presence or absence of sales resistance as measured by the direction of commodity price movements, (*d*) the confidence with which forward buying is done as measured by unfilled orders of the United States Steel Corporation, and (*e*) the index of building activity.

2. *Favorable and unfavorable indications.* The theory underlying the construction of the Brookmire barometers assumes that for all fundamentals there is a healthy normal. When this normal is exceeded by the fundamentals, sooner or later a readjustment back to normal must come. In other words, when the fundamentals advance beyond the normal, an indication of a turn for the worse is to be expected. On the other hand, if the fundamentals fall below the normal, a turn for the better is in sight.

Furthermore, every major upward movement of the fundamentals will be carried by their momentum above the normal, and every major downward movement will be carried below the normal. Production of commodities will be increased until it exceeds consumption and a surplus accumulates which must later be put on the market at a reduced price; people overborrow and interest rates go above normal, requiring readjustment; and people spend more money than they earn and must pay out of later earnings, thus cutting down the amount available for new purchases.

For these reasons business conditions become unfavorable when the normal is exceeded by fundamentals. On the other hand, in a period of decline, the opposite situation develops and indications turn favorable.

3. *The neutral zone.* When a barometer is so largely based on the relation which its component factors bear to a normal condition, it is apparent that the location of the normal condition is of central importance to the construction of the barometer.

In handling the data used, marked seasonal variations are always eliminated. Correction for secular trend is avoided wherever possible. For example, the turnover of bank deposits used in a number of barometers is a ratio between bank deposits and bank debits, both having about the same secular trend; and, therefore, the turnover figures need no correction for secular trend. Again, in the case of pig-iron production, it is found that through a series of years the average production is 71% of the capacity. This figure is taken as normal and the production of any month is computed as so many per cent greater or less than the normal capacity. The normal for steel production and cotton manufacture are found by the same method.

The normal for the import-export factor is found by dividing the total of imports for the last 24 months including the present month by the total exports for the same period. The normal thus has a sliding base of 24 months. The import-export ratio for any given month then is a certain percentage greater or less than the normal ratio.

A normal or basing line is computed for each fundamental factor. Now since major advances by their own momentum tend to outrun the normal and major declines tend to go below the normal, some allowance must be made for such variations. When the composite for all the factors in a barometer is favorable, the base used for each factor is 110% of the normal base until the composite turns unfavorable, when 100% of the normal is again used as the base.

An allowance of 1% from the base used is made for errors. Thus when the composite is favorable, if the production of pig iron for any month is within 1% of 110% of the normal, the position of pig iron as an indicator is neutral; if the production is more than 1% above 110% of normal, the indication is unfavorable; and if more than 1% below 110% of normal, the situation is favorable. A very important result of making the normal condition the base of comparison for all factors used in the barometers is the elimination of all temporary fluctuations from the barometric graphs. When only major movements appear, the forecasts can be more definite and certain.

4. *The barometers.* It has been found that certain factors vary by large percentages and others by very small percentages from the normal. Those factors that vary abnormally are corrected by using the logarithms of the percentages of variation. The variation of all other factors are made comparable by reducing them to a range of fluctuations varying from 75% to 125% of normal. For example, if the production of pig iron varies through a series of years from 60% to 130% of normal, that is, 40% below and 30% above normal, then the variation for any month is reduced by multiplying it by 5/8, if below normal, and 5/6, if above. Interest rates vary between 94 and 106 and, therefore, the variation for any month is multiplied by 4.

After the seasonal correction of each factor has been made, after the normal has been found, after the percentage above or below normal for a given month has been computed and corrected to the 75-125% basis, there remains the combination of the results into a composite or barometer.

In computing the composite for commodity prices, the figures obtained by the above process for the volume of production in basic industries are weighted by one, the import-export ratio by three, the turnover of bank deposits by one, and the commercial paper rates by two. These weights are varied depending on the position of the com-

posite. For example, if the composite is in an unfavorable position, the volume of production factor, if above normal, is weighted by three instead of one as above.

Some of the final results of the above computations may be unfavorable, others may be favorable. The unfavorable results are given negative signs; the favorable, positive signs; and the composite is found by taking the algebraic sum of all the results.

The composite is cumulative, for the result of each month is added to the figures for the previous month. The graph of the monthly composite figures, therefore, mounts upward rapidly in a major advance and, likewise, falls quickly in a major decline.

The barometers for industrial stock prices and railroad and public utility stock prices are made by the same methods as the commodity price barometer except that two more factors are used and that the weighting is different. Again, the industrial stock barometer is computed the same as that of the railroad and public utility stock barometer except that the weighting in each case is different in certain respects that cannot be taken up here.[5]

The use of the barometers is relatively simple. From 4 to 6 months after a turn downward of the commodity price barometer following an advance, Bradstreet's index of prices will begin to decline. A change for the better in the commodity price barometer after a decline will be followed by an advance in Bradstreet's index after about the same interval.

In the case of the industrial stock and the railroad and public utility stock barometers, the time to buy is the month immediately following the turn upward after a decline. The time to sell railroad and public utility stocks is the month immediately following a turn downward in the railroad and public utility stock barometric line after an advance. In-

[5] For the technical details of the Brookmire system of weighting see Wilson, McDonald H., *Barometers of Commodity Prices, Industrial Stock Prices, Railroad and Public Utility Stock Prices, and Bond Prices*, pp. 33-35.

dustrial stocks should be sold the second month following a turn downward in the industrial stock barometer unless the railroad and public utility stock barometer turned down prior to the industrial stock barometer when industrial stocks should be sold the month immediately following the unfavorable change in the industrial stock barometer.

The bond barometer is not put into graphic form because it does not lend itself to such presentation. The conditions upon which a rise in bond prices depend are a supply of funds and a decline in prices. The supply of funds is due to the slowing down of general business or of speculative activity or both. Commodity prices must decline to a point that makes the interest rates on bonds attractive to the investor. The problem is one of the extent of the decline in business and speculation and in the decline of commodity prices. The Brookmire answer is as follows: (1) "a sufficiently long and steady decline of stock prices so that a six months' sliding average of their direction of movement will remain on a flat or decline for three consecutive months"; (2) "a sufficiently long and steady decline of commodity prices so that a six months' sliding average of their direction of movement will accumulate a loss of 1%." [6]

The beginning of a decline in bond prices after a rise is difficult to foretell but may be expected under the following conditions: (*a*) When the six months' sliding average of stock prices increases for at least three consecutive months, (*b*) when the six months' sliding average of commodity prices accumulates at least 1½% followed by a rise of 1% in a single month, and (*c*) when commercial paper rates take an upward trend.

In the use of all these mechanical means to forecast major turns in the market nothing final is promised. All the forecasting apparatus is intended as an aid to experience and judgment. It is to be used as a tool fully under the control of constructive imagination and thought.

[6] Vance, Ray, *Business and Investment Forecasting*, 1925, p. 145.

FORECASTING BY MOODY'S INVESTORS SERVICE

Moody's service is primarily intended for the guidance of investors. The prediction of the major trends of the stock and bond market is, therefore, one of the essential features of the service.

1. *The stock market the creature of economic forces.* Typical business men buy securities when they have a surplus of funds and sell them when in need of money for use in their business or for consumption purposes. The surplus earnings of industry come into the security market. On the other hand, financial distress in industry is followed by the selling of securities on the market.

The stock market, therefore, does not move ahead of industry and trade but trails after them. The belief prevalent in many quarters that the stock market predicts trade movements is due to the fact that the public does not realize that changes have taken place until some time after the changes have been effective.

Interest rates are determined primarily by the value of trade turnover in terms of dollars and, therefore, are not primarily causes in determining stock prices, nor do money rates ever dominate the market.

The problem of forecasting the security market, then, is one of studying industry and trade with reference to surplus earnings in prosperous times, on the one hand, and the shortage of funds in periods of crisis, on the other.

2. *Rejects simple devices.* Since many economic forces must be taken into account it is necessary to reject simple indexes, automatic barometers, and the method of double tops and bottoms. Pig-iron production has been used as a forecaster by many. More recently the ratio of blast furnaces in operation relative to blast furnace capacity has been used. Both schemes are too simple. The automatic barometers are, however, better than the single indexes because they are based on several fundamental factors.

The objection to these barometers is that the forecaster is limited to a few economic forces and must reject all others. The methods of double tops and double bottoms is mechanical and not based on the broader economic forces which, after all, are basic.

3. *The measures of trade.* As measures of the position of trade the Moody Investors Service uses the following: (*a*) gross trade barometer; (*b*) percentage of trade to normal; (*c*) index to physical volume of trade; (*d*) employment index; (*e*) profits index, referring to gross profits in manufacturing; (*f*) steel tonnage index; (*g*) credits index; (*h*) index of business inflation; (*i*) financial barometer, measuring public purchasing power for securities; and (*j*) trend index, based upon returns which are especially indicative of stock market trend. About ten minor indexes are also used.[7] The trade barometer is a weighted average of basic trade data. Advances in the barometer are bullish and declines bearish except that excessive advances beyond the normal, as indicated by a comparison of the trade barometer and the index of normal conditions, are bearish and excessive declines below the normal are bullish indications.

The unemployment index is given much weight because it is a measure, though crude, of the purchasing power of the public, the use of plant capacity, and the prosperity of employers.

If the ratio of loans to deposits increases rapidly, it is an indication that loanable funds are getting scarce—a bearish indication.

The index of inflation indicates the extent of overexpansion of credit, inventories, and the cost of production. The index of the latent earning power of industries indicates earning possibilities under current conditions.

These indexes are not combined into one barometer index. Each index is used separately and in combination with other indexes. In the use of the indexes they are assigned weights

[7] Taken from a letter by the Moody Investors Service to the author.

according to the impressions of their importance which the forecaster has formed from his study of all the economic forces involved in the situation as he sees it. Thus in 1920 the forecasts were based primarily on credit overexpansion; in 1921, the latent earning power of industries; in 1922, the employment index; and in 1924, the employment index and the ratio of bank loans to deposits.

4. *The stages of the trade cycle.* One of the unique features of Moody's system of forecasting is the division of each trade cycle into six regularly recurring steps or phases as follows:

a) Financial panic—overexpansion and inflation.
b) Rebound from financial panic—forced liquidation and unreasonable fear at an end.
c) Commercial depression—maladjustment of industry that follows the rebound. Not severe.
d) Recovery of commerce—elimination of inflation and coordination of industry.
e) Overproduction or competition—a reaction usually not severe.
f) Inflation boom—inflation of credits and trade, overconfidence.

From April, 1856, to March, 1920, 4 cycles have run their regular sequence of phases. The 4 cycles lasted about 16, 20, 14, and 14 years in order from the first to the last. We are now in the fifth cycle near the end of the third phase. The next phase will be characterized by the recovery of commerce.[8]

5. *Moody and Brookmire methods compared.* It seems evident that the methods of Moody's Investors Service are different from those of the Brookmire people on important points. The Moody people do not stress the money factor nearly as much as does the Brookmire service. Again, the Moody service has no mathematically computed system of weights but permits the forecaster to use his own impres-

[8] *Moody's Investment Letters,* May 6, 1926, p. 145.

sions and judgment as to the weights that should be given to the different factors at different times.

Furthermore, the Moody service claims to include more factors in its forecast than are employed in the Brookmire barometers. The Moody method, as has been pointed out by several writers, while having the advantage of including more fundamental factors than the Brookmire barometers allow, have the disadvantage of the influence of a mistaken psychology on the part of the public and the effect of temporary events on the judgment of the forecasting agency. The Brookmire scheme of weighting allows somewhat for changed conditions and avoids the disadvantage above stated.[9]

THE USE OF BUSINESS BAROMETERS

No one is in a position to say which of the systems of forecasting is the best. All are in the experimental stage and their forecasts are more or less tentative. One of the points of weakness of all is the fact that they publish forecasts too frequently. If an investor could get a complete analysis of the long-time situation at the critical points with an occasional letter showing changes in the different fundamentals, he would be well served.

Each service has its strong points. The investor should keep himself in touch with several of the great services. They are a great advance over the old rule-of-thumb methods that investors have used in the past. On the other hand, no investor should be content to accept the conclusions of any service until he has done much hard thinking on his own account. If used in this manner by investors, the best systems of analysis and explanation of business and financial conditions will put the quality of investment operations of any investor far ahead of anything he could

[9] For a statement of the Moody methods, see discussion by Paul Clay at the dinner meeting of the American Statistical Association, April 17, 1925. See also F. R. Macaulay's criticisms, *Journal of the American Statistical Association,* June, 1925, pp. 244-249.

do by simply relying on his rule-of-thumb and common-sense methods.

SIMPLE BAROMETERS OF SECURITY PRICES

Several relatively simple and direct methods of forecasting turning-points in the stock market have been developed recently. The most noteworthy of these methods have come from the Harvard Committee of Economic Research and Colonel Leonard P. Ayres of the Cleveland Trust Company.

1. *Stock prices and* 1¼% *interest changes.* The Harvard people found that from the period 1884-1913 an advance (accompanied by expanding business) in the rate of prime commercial paper, adjusted for seasonal variations, of 1¼% from the previous low point indicated that stock prices were at or near the peak of the current cycle. On the other hand, a decline (accompanied by a decline in business) in the adjusted commercial paper rate of 1¼% from a previous high point indicated that the stock prices were at or near the low point of the cycle. During the period of the World War the operation of this scheme was somewhat uncertain and did not appear in 1918-1919 at all. During 1921-1923 it operated as before the war. Since 1924-1925, not sufficient time has elapsed to form a correct judgment as to the uniformity of the correlation between the 1¼% change and the turns in the stock prices.

An advance of 1% from the previous low point and a decline of 1% from the previous high point in the adjusted commercial paper rate was found to approximate the turning-points in bond prices for the period 1884-1914. The expected results were true to form in 1917 but did not appear in 1918-1919. The period 1924-1925 is too recent to afford proper data upon which to judge whether the 1% change has the same current significance that it had during the years before the World War.

It is to be noted that there were advances and declines

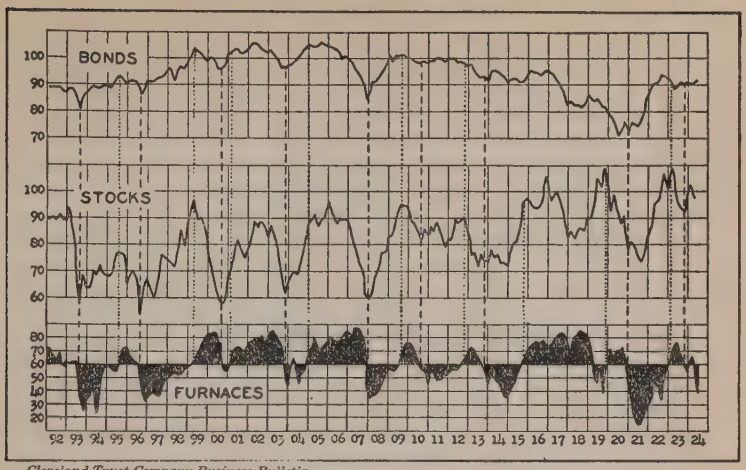
of 1¼% in the adjusted commercial paper rate during the period 1884-1913 that were not accompanied by the expected changes in stock prices, but these cases can be explained by other than business or speculative causes. When the changes in the interest rates were accompanied by substantial changes in business and speculative activity, the rule held true to form.

During the period 1897-1913 if one had bought industrial stocks immediately after the decline of 1¼% in the adjusted commercial paper rate and sold them immediately after a rise of 1¼%, the stocks, on the average, would have cost $66.10 against an average of $61.40 at the low points and would have brought, on the average, $84.50 as compared with $88.30, if sold at the highest possible prices.

If one had bought railroad stocks on the same basis, his cost would have been $96.30 against a possible minimum of $92.80 and his selling price would have been $118.10 against a possible maximum of $120.60. Trading on this basis should be sufficiently profitable to suit any one.[10]

2. *The blast furnace barometer.* Colonel Leonard P. Ayres has developed several direct methods of forecasting stock and bond price movements. The best known method is that based on the activity of blast furnaces. According to Colonel Ayres' findings, both stock and bond prices are at or near their high points when 60% of the blast furnaces of the country are active at the same time and, conversely, the prices of stocks and bonds are at or near their low points when the number of furnaces in blast falls below the 60% mark. According to Colonel Ayres' chart comparing stock prices and the percentage of blast furnaces in operation from 1892 to 1924, the blast furnace barometer correctly marked the major buying and selling points 15 times, gave fair to poor approximations 4 times, and missed the market

[10] For the complete discussion of the points above summarized see article by Persons, W. M., and Frickey, Edwin, "Money Rates and Security Prices," *The Review of Economic Statistics,* January, 1926, pp. 29-46.



Cleveland Trust Company Business Bulletin.

Figure 22: Correlation of stock and bond prices to the blast furnace barometer.

twice. Figure 22 shows the remarkable correlation of stock and bond prices to the blast furnace barometer.[11]

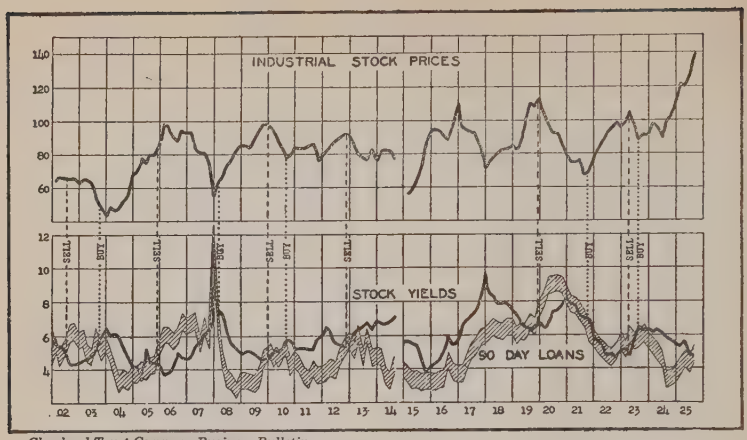
3. *Interest rates and security yields.* In later studies Colonel Ayres has shown that, except for the years 1918-1920, when the rate on 90-day brokers' loans went higher than bond yields, the price of stock was at or near its peak; and, conversely, when the rate on 90-day brokers' loans went below the bond yield, the price of stock was at or near the low point of the cycle.

This method, however, is not so uniformly successful as the blast furnace barometer. For the period 1890-1925 the method was correct 9 times, fair to poor 4 times, and missed the market 4 times.[12]

Another suggestion of Colonel Ayres is that when the yield on the industrial stocks used in the Dow, Jones industrial stock price averages falls below the rate on 90-day brokers' loans, the price of stocks is at or near the peak; and, conversely, whenever the yield on stocks is higher than

[11] *The Cleveland Trust Company Business Bulletin,* July, 1924.

[12] *Ibid.,* July, 1925.



Cleveland Trust Company Business Bulletin.

Figure 23: The relation of stock prices to the yield on stocks and the interest rate on brokers' loans.

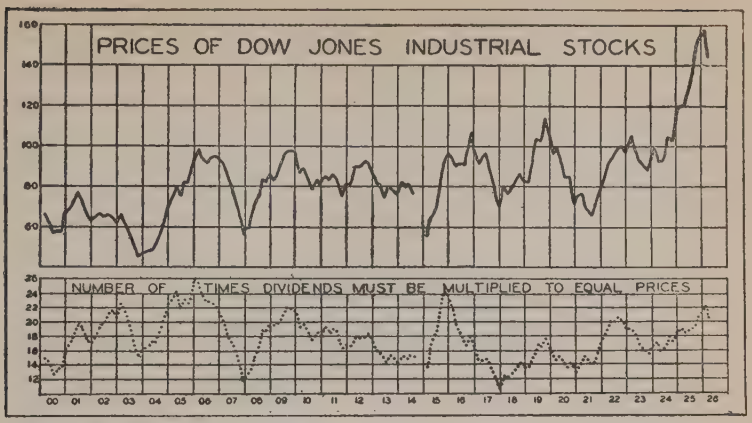
the rate that customers must pay brokers for loan accommodations, the price of stock is at or near the low point of the movement.[13]

In Figure 23 is shown the correlation between stock prices, trends of stock yields, and the rate on 90-day brokers' loans. The solid line in the upper chart gives the Dow, Jones industrial stock price averages for the period 1902-1925; the solid line in the lower chart shows the yield on the 20 industrial stocks used in the averages; and the cross-hatched area gives the interest rate, the lower line of the area indicating the rate on 90-day brokers' loans and the upper line the rate charged customers by brokers estimated at 1% higher than the rate paid by brokers.

Again, the correlation is not as good as that between the blast furnace barometer and stock prices. For the period 1902-1925 the indications to buy or sell were correct 12 times and missed the market 5 times.

4. *Stock prices and bond yields.* In their studies of stock prices the staff of Moody's Investors Service found that for many years stock prices had about reached the "ceiling"

[13] *Ibid.*, September, 1925.



Cleveland Trust Company BusinessBulletin.

Figure 24: The relation of the prices of the 20 industrial stocks of the Dow, Jones averages to the dividends paid.

when they had gone to the level at which the yield on stocks was one-half of 1% lower than the yields on competing bonds, that is, new corporation issues of bonds which would appeal to an investor as an alternative to stocks.[14]

5. *Stock prices and dividends.* The relation between the prices of leading stocks and the dividends paid by them has been used by many investors as a means of judging whether stock prices are inflated or depressed.

Colonel Ayres' studies have made definite what is but a vague relationship in the investor's mind. Figure 24 shows the results of his work. The solid line represents the monthly average prices of the industrial stocks used in computing Dow, Jones industrial stock averages. The dotted line represents the number by which dividend yield must be multiplied to give the average stock price. For example, 20 on the dotted line means that the average stock price is 20 times the dividend yield.[15]

The dotted line in Figure 24 shows the prices of the industrial stocks used in the Dow, Jones industrial stocks price averages in 1903 about 23 times; in 1906, 26 times;

[14] *Moody's Investment Letters,* January 21, 1926.

[15] *Cleveland Trust Company Business Bulletin,* April, 1926.

in 1909, 22 times; in 1915, over 24 times; in 1919, nearly 18 times; and in early 1926, 22 times the dividends paid. These were the high peaks in stock prices. At the bottoms, the prices averaged in 1900, 13 times; in 1903, 15 times; in 1907, 12 times; in 1913, 14 times; in 1917, 11 times; and in 1920-1921, 13 times the dividends paid on the stocks.

These figures seem to indicate that when the leading industrial stocks sell at prices above say 20 to 22 times the dividends paid such prices are inflated. On the other hand, prices are low when prices are only 12 to 14 times the dividends paid. Colonel Ayres notes that the "time" curve never turned downward after the close of a bull market unless it fell before recovery to at least the 17 "times" line. It is also noteworthy that while from the beginning of the century to 1917, the prices of stocks were declining relative to yield, since that time prices have been rising relative to yield, that is, stocks have been selling at a decreasing yield. This may mean that in the relatively near future prices will again go to 25 or more times the dividend yield as in 1906.

These statistical methods of judging the market have the advantage of simplicity but also have the disadvantage of depending on one fundamental as a representative of the business and financial situation as a whole. They are tools that must be supplemented by a study of other fundamentals.

COMMON-SENSE METHODS

The investor in stocks is always willing to wait a long time for returns, but he wants them to be worth while when they come. This means that he must accumulate stocks at a low price and sell them many points above cost. The problem, then, is to judge when prices are low and when they are high. The systems outlined in former sections of this chapter are attempts by more or less scientific processes to locate the high and low points in the movements in business and also in the stock market. There are, how-

ever, more or less common-sense methods which many investors employ that have given very satisfactory results.

Buy when the depression is unmistakable. The genuine investor waits before buying until the depression period is a fact acknowledged by the most optimistic. He knows that severe maladjustment in the economic organization will be followed by a considerable period of readjustment which will give him plenty of time to accumulate his favorite stocks.

The economic factors which indicate that a buying period is ahead are well known: (1) severe unemployment, (2) many business failures, (3) great losses by many people and corporations, (4) iron and steel production at a minimum, (5) car loadings very low, idle cars on every track, (6) tremendous liquidation of stocks and bonds, (7) a great decline in commodity prices, (8) bank loans being liquidated, (9) interest rates high but falling, (10) bank reserves accumulating, (11) debits to individual account having had a considerable decline, (12) pessimism general, (13) the stock market inactive with small volume of sales, and (14) large yields on the best stocks.

When the above conditions are present, the investor is on the watch for first signs of betterment and, when these begin to appear, he is picking up stocks at low prices. It is true prices may go lower, but he buys outright or covers with a heavy margin. He is not discouraged when he pays 5 points more than the minimum price. Having accumulated the best stocks, he awaits the next period of prosperity. He does not care to turn his stock every six months or every year even. The stock more than pays its carrying charges and nothing can be gained by trying to guess the short swings of the market.

Finally the period of prosperity has arrived and stock prices are going up. The investor watches the trend of business. He does not bewilder himself in a maze of statistics but picks out a few essentials. He wants to know the kind of management that is behind the corporations in

which he is interested and their financial condition and earnings. On these points he must ever be alert, and if any weakness appears, he must switch to some other stock.

Next the degree of prosperity of the farmer, the situation in the construction industries, the course of commodity prices, the relative production of iron and steel, inventories, and credit conditions are essentials. In other words, a half-dozen fundamentals tell the story for all practical purposes. After all these factors have made a very considerable advance and the prices of stocks have reached a level that affords a very satisfactory profit, the investor may put himself on the safe side and begin gradually to sell his stock or he may wait for the period of hectic prosperity when excitement runs high, credit is dear, and the newsboys are trading in stocks, and take a chance in judging the time of the break. The stop-loss orders may be used to good advantage at this stage. Most investors, however, will be out of the market when this stage arrives.

There is much to be said for this method of operation. On the whole, it is a profitable method. It is faulty in that most of this type of investors hold that all of the more scientific methods of analysis are academic and so theoretical as to be impracticable.

CONSTRUCTIVE INVESTING

The investor in stocks is one of the greatest constructive factors in the economic organization. He puts his funds into the different lines of industry when they are in a period of depression, hoping to share in a coming period of prosperity as the reward for his taking of risks in a time of trouble.

We need but few men who devote their whole time to the stock market but we need many men who are engaged in business and invest their funds on the long-time basis in the stock market. Such men should not put money into stocks except for the long pull.

There are two plans of operation in this field. According to the first, the investor buys well-seasoned, well-protected stocks of the great corporations in periods of depression and holds them until the period of prosperity advances their price to a level which provides a satisfactory profit.

According to the second plan, the investor selects a new, well-managed industry which he believes should have a prosperous future if properly supported. He puts part of his money into the stock of this company and then stays with it year after year through depression and prosperity until it has grown strong, when he may sell his stock and use the funds in another like enterprise.

An investment of this type favored by many investors takes the form of buying the stocks of a railroad or industrial corporation which has been thoroughly reorganized both as to its management and financial set-up and gives promise of better things, and then staying with the company year after year.

Both types of constructive investment should appeal to the individual with funds. It may be said, however, that the latter type should not be undertaken except by people of considerable means because the risk of loss is many times greater than when funds are put into the old-seasoned, well-managed concerns.

Smith has shown that investment in diversified lists of stocks held over long periods of time, for example, from 1901 or 1906 to 1922, have in every case proved much more profitable than investment bonds. This he found true for both the period of declining prices ending in 1896 and for the period of rising prices following.[16] There can be no doubt but that wise constructive investment will be well rewarded.

[16] Smith, Edgar L., *Common Stocks as Long-Term Investments.*

XXVII

METHODS OF RATING SECURITIES

Symbols used and their meaning. The fundamental factors in rating. Moody's method of arriving at the ratings. Poor's system of rating. Fitch's system of rating. The Standard Statistics Company's ratings. The *Financial World's* rating system. Conclusion.

ATTEMPTS at rating securities by investors are, of course, as old as the investment business itself, but carefully constructed systems of rating are a recent development. About 16 years ago John Moody began the construction of a rating system which should make it possible for the more or less experienced investor to know with but a small amount of study the relative rank of securities. At first he undertook to rate railroad bonds only. Stocks were added later. As time went on the system of ratings was perfected, and the number of stocks and bonds rated was enlarged so that at the present time Moody's ratings comprise four large volumes covering (1) Governments and Municipals, (2) Public Utilities, (3) Steam Railroads, and (4) Industrials.

In the meantime other systems of rating have been built up. Among these the rating services of Poor, Fitch, the *Financial World,* and the Standard Statistics Company are the most important.

None of these services claim to be able to rate securities in any absolute sense. All ratings are more or less relative. The fact is that some securities are better than others, and those that stand at the head of the list are given the highest rank, while others are placed as nearly as may be in their proper relative position.

Furthermore, securities may be rated from different points of view. For example, security of principal and income may be selected as the basis of rating. Again, it may be mar-

ketability, or the rate of yield or profit possibilities, or exemption from taxation, or some other quality that is made the purpose of the rating.

The rating services above mentioned without exception make the safety of principal and certainty of income the cornerstone of their ratings. Marketability is also considered in each case but is a secondary factor in the determination of the rank of a security in all but the services of the Standard Statistics Company and the *Financial World*.

The current phase of the business cycle is not of primary importance in their rating. A bond may be selling at 110 at one stage of the business cycle and at 100 at another stage but have the same rating throughout the period.

The investor must consider many factors besides a rating based on safety of principal and income. The rating may be excellent, but the price may be too high relative to other stocks or bonds of the same rating or, again, the price level of the market may be ready for a considerable decline on account of changing money rates and business conditions. An adequate rate of return, proper diversification, and marketability are also factors of importance. An investor holding a large amount of the most conservative low yielding bonds may find it advisable to accumulate securities of lower rating but higher yield. The factor of diversification may call for securities of less rank than the very best. Marketability may be the determining factor to the investor, who may need funds for business purposes at short notice, or who has his funds tied up in inactive bonds or stocks and wants more liquidity in his holdings. The fact that a bond or stock has a high rating simply from the point of view of intrinsic merit is, thus, no warrant for its purchase by an investor. He must consider many other factors.

SYMBOLS USED AND THEIR MEANING

Table 43 aims to give a comparative view of the rating symbols used by the different important rating services.

TABLE 43

SYMBOLS USED IN RATING SECURITIES

Moody's Service		Poor's Service		Fitch's Service Bonds	Standard Statistics Co.'s Service Bonds, Stocks	Financial World Ser. Stocks	Meaning of Symbols
Bonds	Stocks	Bonds	Stocks				
Aaa	A*aa*	A***** A****	A**	AAA	A1+	A	Highest
Aa	A*a*	A*** A**	A*	AA	A1		High
A	A	A* A	A	A	A		Sound
Baa	B*aa*	B**	B**	BBB	B1+	B	Good
Ba	B*a*	B*	B*	BB	B1		Fair
B	B	B	B	B	B		Semi-speculative
Caa	C*aa*	C**	C**	CCC	C1+	C	Speculative
Ca	C*a*	C*	C*	CC	C1		Highly speculative
C	C	C	C	C	C		Uncertain
Daa	D*aa*	D**	D**	DDD	D1+	D	Low or weak
Da	D*a*	D*	D*	DD	D1	D1	Small or very weak
D	D	D	D	D	D	D	Slight or doubtful value
					E or F		Very little value

In Table 43 it will be noticed that Moody uses somewhat different symbols to represent stocks as distinguished from bonds. He does this to emphasize his idea that "the difference between a bond investment and a stock investment is a fundamental one." Poor's service uses the same symbols for bonds and stocks with about the same meaning but there are no stocks rated above A** classification.

Since bonds and stocks are both rated from the point of view of their investment merit, it would seem that a simple scheme of rating would be more logical, better understood, and more usable than a complex scheme which separates bonds and stocks. Investment merit is a matter of degree and common stocks have their place in the different degrees of merit from the lowest to the highest the same as bonds, though common stocks may not reach as high a rank as bonds. Poor's scheme of rating stocks is, therefore, to be preferred to that of Moody.[1]

[1] See Kirshman, J. E., *Principles of Investment*, p. 318.

In the case of bonds, Poor's service subdivides the purely investment bonds more minutely than the other services. The rating A***** applies to United States Government obligations only.

The meanings of the symbols as given in Table 43 do not fit the given class of security of each service precisely in each case, but approximately the same rank in the series of classes holds true for all. For example, the "Aaa" rating by Moody is the highest with reference to asset value, earning power, and stability as compared with the "A1+" rating by the Standard Statistics Company as the highest with reference to earning power, asset value, and marketability. The rank is precisely the same, though the basis of grading is somewhat different.

It is evident that all the systems of rating conceive securities as falling into four great classes represented by A, B, C, and D. Each of these great classes is conceived in terms of three grades, except that Poor's service divides the "A" class into five grades and the *Financial World* omits further ranking. All the services use the same symbols for the major classes and differ only in the symbols used to represent the gradations within the major classes. Poor's service puts three grades of bonds above the highest grade of stocks.

Major class "A" for all the services includes only sound investment issues. Assets in every case have a liquidating value ample to cover the securities, there is a large average margin of earnings above interest or dividend requirements, and only in exceptionally unfortunate circumstances will changes in earnings have any effect on the price of even the lower grades of this class. With these few exceptions the changes in the prices of the "A" class of bonds are determined by the interest rates and credit conditions. Stocks in this major class are well seasoned, having continuously earned and paid their dividends through periods of depression, and have large equities in the assets of the company.

Class "B" securities are sometimes designated as "business men's investments." These securities yield a higher rate

of income than those of class "A," but they also contain many elements of uncertainty not found in the higher major class. In the highest group the investment features far outweigh the speculative elements, but in the lowest the speculative factors predominate. The two upper groups in this class may be said to be held fairly safe as investments, but the lowest group is merely a better grade of speculative issues. These latter securities are not seasoned, the equity in assets may or may not be adequate, and earnings are of fluctuating character.

Class "C" securities are definitely speculative. No true investor would be interested in even the highest grade. They often have possibilities for the future but the risks are great. The lowest grade is uncertain as to present position and as to future prospects. Little of substantial earning power is found in this grade.

Class "D" is extremely speculative at the best. The most are of very little value or in a hopeless condition.

In general it may be said that all the grades of the "A" group and the two highest of the "B" group are characterized by the predominance of the investment elements over the speculative factors. In all the other grades the speculative elements predominate, varying from a fair balance between the two kinds of factors to the absence of even any speculative value.

THE FUNDAMENTAL FACTORS IN RATING

Each rating service has its own views as to the factors taken as primary in a rating system. Below are given the factors in the order in which they are usually given by the different services:

Moody's service. Asset value, earning power, and stability; salability is secondary.

Poor's service. Asset value and earning power; salability is secondary.

Fitch's service. Earning power and financial conditions.

Standard Statistics Company's service. Earning power, asset value, and marketability.

Financial World's service. Capital structure and earning power, current and prospective.

The methods used to estimate the position of the fundamental factors are somewhat different for each service. These methods are taken up in the following pages.

MOODY'S METHOD OF ARRIVING AT THE RATINGS

1. *The rating council makes final ratings.* Moody's first ratings are all based on statistical formulas. The formula for bonds gives a properly weighted combination of the three fundamental factors, asset value, earning power, and stability. The application of the formula to the data on these three primary factors gives a numerical result called the "statistical rating."

The "final rating" is made by a rating council, consisting of over a dozen experienced men who modify the "statistical rating" with reference to the non-statistical factors which are always present and of more or less importance. The final ratings thus represent the best judgment of the rating council as based upon the "statistical rating" and upon such relevant information as to the management, position of the industry, competition, and future outlook as the council may have.

Stocks are rated in the same way as bonds, except that "formulas distinctly independent of those applied to all bond issues" are used in computing the statistical rating for the stocks.

2. *The data on railroads.* In making its final ratings the rating council takes into consideration every item of information available. This information is broadly classified under headings as follows: (1) history of the road; (2) the

management; (3) the location; (4) the physical property; (5) the income factors; and (6) the capitalization factors.

The history of the railroad and its present management are very important items but cannot be set down in statistical form. The location of the road and territory served may be studied in part from statistics of population, industry, and business but for the rest the good judgment of the rating council must be depended upon.

The study of the physical factors is largely a survey of statistical data. The facts of one road must be compared with those of other roads similarly located and doing a like business. To this end the physical factors of all roads are reduced to the usual units: the mile, the ton, the passenger, the locomotive, the car, and the train. The condition of the property any single year need not have great weight; the average condition over a period of years is the really significant item. This, however, must be considered relative to the trend shown by the more recent statistics.

The asset value of the physical property of the railroad as a going concern is of primary importance in rating bonds and stocks. The property values must amply cover a bond issue or it cannot have a high rating. Moreover, the condition of the assets must have an upward trend and compare favorably with the property values of other high-grade roads. The same is true of stocks, though in their case more emphasis is placed upon earnings.

The term income factors, as used by Moody, refers to the earnings and their distribution per mile of road. Special emphasis is placed on average gross revenue, maintenance of way and equipment, other operating expenses, net operating revenue, balance for charges, fixed charges, the margin of safety and the dividends paid per mile of road on the average over a period of 10 years. Average annual gross revenue, maintenance, and the margin of safety per mile, when compared to like figures of other roads, are the high points in determining the road's income.

The capitalization factors, like the income factors, mean

little in themselves, but over a period of years, and compared to other roads, they tell an essential part of the story. The high points are the total capitalization per mile, the ratio of bonds to total capitalization, the net income on net capitalization, and the margin of safety. These points are considered as averages and then modified with reference to their trend over the 10-year period.

3. *Data on industrial securities.* Asset value, earning power, and stability are the three points of primary importance in the rating of the industrials as in the rating of the railroads. The history and the management are considered in connection with the future outlook of the industry and may lead the rating council to modify very materially the statistical rating.

For the statistical rating the comparative income account and financial statement are of highest importance. From figures given by them the asset value, the margin of safety, the average factor of safety, and the average income are ascertained after proper deductions have been made for depreciation, good-will items, and other intangibles, and after the current assets and current liabilities have been analyzed and such additions and deductions made as appear necessary. The data on industrials cover a period of 5 years as compared with the 10-year period of the railroads.

4. *The data summarized for rating.* In the rating books after the physical, income, and capitalization factors have been analyzed on a per mile basis in the case of railroads, and after the income and financial statements have been examined in the case of industrials and public utilities, final summaries in terms of averages are given. For bonds a bond record table, and for stocks a stock record table sum up the essential items for rating purposes. The essential items given in the bond record tables are maturity amount outstanding, the average income available, the interest required, the factor of safety, the security, and the salability. These items are used in both railroad and industrial bonds. The essen-

tial items given in the stock record tables are of dividend, amount outstanding, average income, the dividend required, the factor of safety, and salability.

The factor of safety, the security, and the salability are final figures in the statistical ratings of bonds and the asset value, the average income, and the salability in the statistical rating of stocks.

As indexes of earning power Moody uses the margin of safety and the factor of safety. The average factor of safety over a period of years is considered in connection with the trend of the margin of safety over the same period is employed as a measure of the income factors. The margin of safety is found as follows: (1) find the amount available for fixed charges by subtracting taxes and depreciation from the net income; (2) find the fixed charges by adding the interest on funded debt, interest on floating debt, charges to sinking funds, rentals and other fixed charges; (3) subtract the fixed charges from the amount available and divide the remainder by the amount available or "balance for charges." The resulting ratio expressed in terms of percentage is the margin of safety. For example, a company has $1,000,000 available for fixed charges; the fixed charges are $500,000; then the margin of safety is 50%, that is, the amount available is twice the fixed charges. If the margin of safety had been 75% then the fixed charges would have been earned 4 times.

The factor of safety is found in exactly the same way as the margin of safety except that "balance for charges," or amount available for charges, has been reduced by subtracting interest on floating debt and rentals. Suppose in the case above cited that there was but one bond issue, and that the interest on floating debt and the rentals amounted to $100,000, then the factor of safety of the bonds would amount to $500,000 ($900,000 — $400,000) divided by $900,000, or 55.6%. In other words, the capital charges were earned 2¼ times.

Since the margin of safety and the factor of safety may be

high, due to small maintenance, it is necessary to note carefully whether the property is adequately maintained by sufficient expenditures for maintenance. If this is not done, the supposedly trustworthy indexes of earnings may be means of error.

Moody uses a cumulative factor of safety. For example, if there are available for fixed capital charges $1,000,000, and a first lien requires $200,000 and a second $200,000, then the factor of safety of the senior issue is 80% and of the junior issue 60%. The base for all issues remains the same and the amount subtracted amounts to the charges for the issue under consideration plus the charges of all issues having a prior or equal claim.

The factor of safety for one year may not be a fair measure of the earning power of a company, but an average of the factors of safety over a period of 10 years for railroads and 5 years for industrials becomes a fairly accurate key "to the position of a bond or preferred stock, as far as income and earning power are concerned." When a bond has an average factor of safety of 40%, it is "usually in a really sound position"; 50%, in a "much stronger position"; and 75%, in a "really high grade one." "Of course, not all bonds with a factor of safety of 75% are given the highest rating, because in arriving at the ratings the other factors, such as assets, security, and stability, are all considered."

In the ratings the factor of safety is given in percentages; security, as very high, high, large, good, fair, poor, and small, corresponding in a general way with the classes of securities for which symbols are used; salability, as very high, high, good, fair, and poor. A bond with a factor of safety of 75% or over, security very high, salability very high, should receive an "Aaa" statistical rating. Again, a stock with equity in assets very high, a record of earnings proved by a prolonged depression period, and salability very high, should have an "A" or better statistical rating. It must be remembered that this rating, for many reasons,

may be very materially modified before a final rating is agreed upon.

As said on a preceding page, the statistical factors mentioned above are combined according to separate formulas for bonds and stocks to give a statistical rating which is a sort of index of the relative standing of securities in question. This statistical rating is then modified and corrected by a rating council to meet the dictates of its best judgment.

Public utility bonds and stocks are rated on the same general principles as railroad and industrial securities. The rating of government and municipal bonds must be based primarily on the financial position of the country, state, city, or town of issue. Such factors as trend of population, location, types of industry, the political situation, and past history are important, but the financial position is given first consideration.

POOR'S SYSTEM OF RATING

Poor's service stresses the point that all its ratings are relative, each issue of bonds and stocks being rated with reference to other issues. No clear-cut distinction is drawn between bonds and stocks, as in the Moody service. Both bonds and stocks are classified into four groups: (1) high grade, (2) business men's investments, (3) speculative, and (4) low grade. United States Government obligations are given a class by themselves at the head of the list.

Poor's service makes asset value and earning power the pillars in its rating structure. Salability is given less weight than is given to this factor by Moody. However, a rating of salability separate from the regular ratings is given, according to which securities are divided into four classes as follows: (1) listed on leading exchanges and active with spread between bid and asked price not over one point, (2) listed or unlisted with spread of not over three points, (3) listed or unlisted, inactive, spread over three points, and (4) inactive, local market.

There are no mechanical standards for rating. Rating formulas can be of only minor usefulness. Experience and judgment of values must play a large part in all rating.

The factors taken into consideration by Poor's service in the rating of railroads are practically the same as those used by Moody's service. The same is true of public utilities and industrials. Poor's service differs from that of Moody in the methods of using the data, however. In ascertaining the value of assets much emphasis is placed on the liquidating value as compared to Moody, who holds going value of more importance. Again, the Poor service does very little if anything with the "factor of safety." Moreover, the principle of averages so emphasized by Moody is accepted only in part, but trend in assets and earnings is given great emphasis. The trend of a company's progress in recent years is of much greater significance than the average factor of safety.

The highest grade of bonds must be safe beyond doubt as to assets and interest, as indicated by the trend of the value of the assets and of the earning power. The highest grades of stock possess an equity in assets well in excess of the par value of the stock, a long and favorable dividend record, and must have demonstrated their ability to earn their dividend safely during a prolonged depression. Earnings during periods of depressed business must not go so low as to affect the dividend rate.

These requirements of first-grade bonds and stocks stress the essentials of a system of rating.

FITCH'S SYSTEM OF RATING

The Fitch service rates bonds only. These are divided into two great divisions as follows: (1) investment and semi-investment, including all bonds grouped under the "A" and "B" classes; (2) speculative issues, including those grouped under the "C" and "D" classes. The "C" group is unpromising, and the "D" group includes the bonds of

companies in liquidation or about to be drastically reorganized with little value in view for the given securities.

The fundamental factors in Fitch's ratings are the earnings and financial conditions. The position of the lien is, of course, always considered. The amount and consistency of earnings dominate the first stages in the rating process. Next are taken up the financial conditions.

The elements to be considered in relation to the future of earnings are (1) the basic nature of the industry; (2) the degree of necessity of its product; (3) the stability of the market for the product; (4) the competition and probable changes in the industrial processes; and (5) the position of the given company in the industry and its power to meet competition.

The financial position of the company is indicated by its net worth, capitalization, floating debt, approaching maturities, its bonded debt, the nature of the industry, and the company's position relative to other companies in the industry.

The elements that apply to a specific issue of bonds are: (1) the mortgage, first, second, and so on; (2) amount of the obligation relative to available assets; and (3) amount of other capital issues of the company.

In addition to the regular ratings the Fitch service also rates bonds as to their selling position. Bonds selling at prices higher than that indicated by the average yield of their class are marked with a plus (+) sign; those selling at a price below that indicated by the average yield of their class are marked with a minus (−) sign; and issues selling "in line" with their class are designated by a star (*).

THE STANDARD STATISTICS COMPANY'S RATINGS

The fundamental factors used in its rating system by the Standard Company in the order of their importance are earning power, asset value, and marketability. Earning power is here frankly put ahead of asset value, because "if

earning power should prove insufficient for any length of time to provide adequate support for interest requirements the investment value of the bond in question must necessarily become impaired." Marketability is placed with the fundamental factors because "an active market with close quotations affords protection to the owner in case of sudden need for funds, and, furthermore, a bond of this character is much more acceptable as collateral than one that is inactive marketwise or with 'bid' and 'asked' quotations widely apart."

The Standard service, like Poor's service, lays especial emphasis on trend. In order to give proper weight to trend, a weighted method of computing the earnings is used. The simple arithmetic average of earnings over a five-year period may be very misleading as to the earning power of a company, as the following illustrations will show. Take two corporations, A and B, with earnings available for interest as shown in Table 44.

The five-year average earnings of Corporation A indicate an earning power equal to that of Corporation B. Nothing in the average shows that Corporation A is rapidly losing ground while Corporation B is forging ahead. These important facts are brought out by weighting the earnings as is done in Table 45.

TABLE 44

SIMPLE ARITHMETIC AVERAGE EARNINGS, FIVE-YEAR PERIOD

CORPORATION A		CORPORATION B	
Year	Amount Available	Year	Amount Available
1921	$1,000,000	1921	$ 200,000
1922	800,000	1922	500,000
1923	700,000	1923	700,000
1924	500,000	1924	800,000
1925	200,000	1925	1,000,000
5-year average	$ 640,000	5-year average	$ 640,000

TABLE 45

WEIGHTED AVERAGE EARNINGS, FIVE-YEAR PERIOD

CORPORATION A				CORPORATION B			
Year	Amount Available	Weight	Weighted Amount Available	Year	Amount Available	Weight	Weighted Amount Available
1921	$1,000,000	1	$1,000,000	1921	$ 200,000	1	$ 200,000
1922	800,000	2	1,600,000	1922	500,000	2	1,000,000
1923	700,000	3	2,100,000	1923	700,000	3	2,100,000
1924	500,000	4	2,000,000	1924	800,000	4	3,200,000
1925	200,000	5	1,000,000	1925	1,000,000	5	5,000,000
Total		15	$7,700,000	Total		15	$11,500,000
5-year weighted average			513,333	5-year weighted average			766,666

A comparison of the weighted averages with the unweighted averages indicates a falling off of earnings in Corporation A and an increase in Corporation B.

This method of weighting is also applied to the number of times interest on bonds is earned, as is illustrated by examples in Table 46.

A comparison of the weighted averages of times interest is earned, compared to the unweighted averages, enables the investor to easily judge the trend of the earning power of the corporation.

The value of the property behind the security is of importance second to earning power. Much the same factors are considered in ascertaining asset value as are used by other rating services.

THE FINANCIAL WORLD'S RATING SYSTEM

The ratings of the *Financial World* apply particularly to stocks. The factors considered fundamental by Louis Guenther, editor of the *Financial World*, are the capital structure and the earning power of the company. In Guenther's *Independent Appraisals of Listed Stocks, Key to Appraisals*, page 16, the writer points out "that in the final analysis it is a corporation's financial position and earning power which determine the future market value of its se-

TABLE 46

WEIGHTED AVERAGE TIMES INTEREST EARNED

CORPORATION A				CORPORATION B			
Year	Interest Times Earned	Weight	Weighted Times Earned	Year	Interest Times Earned	Weight	Weighted Times Earned
1921	4.40	1	4.50	1921	2.50	1	2.50
1922	4.00	2	8.00	1922	3.00	2	6.00
1923	3.50	3	10.50	1923	3.50	3	10.50
1924	3.00	4	12.00	1924	4.00	4	16.00
1925	2.50	5	12.50	1925	4.50	5	22.50
Total 5-yr.	17.50	15	47.50	Total	17.50	15	57.50
Aver.	3.50		3.17	Aver.	3.50		3.83
Index of trend			−.33	Index of trend			+.33

curities." All stocks are divided into four classes, A, B, C, and D. Class "A" includes stocks that are without question as to the safety of their principal and interest; class "B" is reasonably safe as to principal with good prospects of an advance in price due to increased earnings; class "C" is purely speculative; and class "D" has little prospect of appreciation.

The capital structure and earning power, as is implied in the classification of the stocks, are valued in reference to the safety of principal and earnings and the outlook for future advance in price. Specifically the factors that make a company's stock high grade are as follows: (1) a good balance between funded debt and the capital stock; (2) net current assets three or more times current liabilities; (3) a conservative and yet progressive management; (4) net earnings double the dividend requirement and trend progressively upward; (5) a plentiful supply of money in the money market; and (6) the excellent general prospects of the particular company and the industry of which it is a part.[2] When all these factors are present, an investment may be considered reasonably conservative.

[2] See "Sound Investment Rules," by Louis Guenther, the *Financial World*, April 17, 1926.

CONCLUSION

All the rating systems reviewed in this chapter make safety of principal and earnings the primary factors in their ratings. This is as it should be. The great majority of the public wants safety of principal and reasonable earnings. Once the point of safety is established, other factors may be added. Marketability is an important quality in a security, but it should not be ranked the equal of asset value and earning power as an investment factor.

But because other factors than safety are of decided value to individual investors, ratings of these might also be given separately. For example, Moody's and Poor's services rate marketability separately. Another feature, a separate rating of which would be of great aid to the investor, is the management. Such a rating would be difficult, but if managements were classed as A, B, C, and D by the reputable rating services, investors would be given an invaluable aid in selecting securities.

A rating service, then, should give its primary rating in a few simple classes based on safety. This rating should be followed by supplementary ratings of other vital elements in the investment situation.

XXVIII

ANALYSIS OF SECURITIES

Net earning power the basis of stock values. Choose seasoned industries with a prosperous future. Selecting the stock to buy. Corporation reports and earning power. The price of stocks.

In the preceding chapter we described the methods of rating securities used by several leading investment services. It is our purpose in this chapter to present methods by which an investor can, on his own initiative, select the type of security which he thinks best adapted to his needs. Before buying stocks the investor wants, first, to be sure, from his study of the business cycle, that stocks are at or near their low point and, second, to be able to select specific securities that have the best outlook for appreciation in the next few years or for the long pull. Both points are very essential.

NET EARNING POWER THE BASIS OF STOCK VALUES

In rating bonds many investors put the value of the assets in the place of first importance and net earning power second. This may be the true relationship when the creditor of the corporation has the right to foreclose a mortgage and wants to be sure that, when earnings are no longer adequate to pay charges, his principal is safe. In the case of stock, however, the above order of importance must be reversed and earning power put ahead of the value of the assets. The return to stockholders is contingent on net earnings per share. Moreover, if earnings greatly decline, the value of the assets will so diminish that bond issues which are ahead of the stock will absorb all the assets in case of bankruptcy.

Though the stockholder does look to the liquidating value of the assets in case of failure of his corporation, the primary purpose of the property is its earning capacity present and prospective and it is on this basis that the market values the share of the company's stock.

No set of circumstances could better illustrate the effect of earnings on the price of stock than the varying price movements of the stocks of the different leading corporations during the bull market of the summer of 1926. Why did United States Steel make a spectacular rise from 117 in April to over 159 in August when the stocks of Anaconda Copper and Standard Oil of New Jersey, two great corporations, did very little marketwise? It was the same cause that led to the advance of General Motors. Steel earned over $8 per share the first half of year, with the promise of equal or better earnings in the second half. General Motors earned over $17 per share the first half of year against $8.19 and $4.57 the same period for the years 1924 and 1923, respectively. The company was working almost to capacity in July. Orders were coming in without the usual summer slump and prospects for second half-year earnings equal to those of the first half-year. On the other hand, the earnings per share of Anaconda and Standard Oil of New Jersey were not large. The management was competent and conservative and the financial conditions of these corporations were sound, but large earnings were not forthcoming, and as a consequence the market for the stocks of these companies remained dull.

The railroads are showing the largest earnings for many years, and their stocks are also making new top prices. American Can and Mack Trucks are examples of extraordinary earnings and also great advances in prices. Davison Chemical in 1924 was thought to be on the verge of great earning power because of the silica gel process for producing gasoline, and its price doubled in a few months. United States Cast Iron and Foundry Company earned nearly $22 per share in 1923 and over $43 in 1924. The company con-

trolled the De Lavaud method of casting cast-iron pipe which enabled it to produce pipe more cheaply than could be done by other methods; therefore, its earnings seemed permanent. The price of the stock in the 1924-1925 movement went to $250 per share from a low of $64 in 1924 and $24 in 1923. In the field of the public utilities during 1924 and 1925 earnings were making rapid strides upward, the public was favorable and 1925 experienced a tremendous boom in public utility prices.

The stock market's valuation of the shares of any company takes into consideration the past, present, and as far as possible the future. The student of stock values must always use present and past earning records, but the future prospects are of greater importance. If inventories are accumulating, competition is looming just ahead, and prices of its product are becoming uncertain, the price of the shares of a corporation will discount the expected reduction in income regardless of the present high earnings.

CHOOSE SEASONED INDUSTRIES WITH A PROSPEROUS FUTURE

New industries involve great risk. Every man has been appealed to by stock salesmen to invest money in the shares of a stock which represents a new industry. These new industries are usually based on a patented process or formula that may or may not prove successful. Even if the process is right, it may take a long time to develop a market for the new product. The argument made by the salesman is to the effect that great profits are probable and that the only way to share them is to "get in on the ground floor." It took the automobile business many years before it became a great industry. Of the hundreds of companies which went into the automobile industry, only a few remain that make large profits for their owners.

Several years ago the radio business started with a rush. The market seemed unlimited and the basic processes fairly well developed. But today, after five years of development,

where is the company that is making any real earnings? The stock of the most promising company, The Radio Corporation of America, has hardly come up to the least sanguine expectations. The high and low prices of 1924 were 66⅞ and 25⅞; of 1925, 77 and 39; of 1926 to September 10, 52½ and 32, respectively. This showing during the period when the Dow, Jones industrial averages climbed from 88.33 to 166.64 was surely not in line with early hopes. The stocks of the rayon industry were enthusiastically received by the market, but who is enthusiastic about them now? The history of the companies which have attempted to popularize the new electric refrigeration processes has been characterized by severe competition, failure, and consolidation. Only a few companies are making reasonable profits. The most promising are those sponsored by powerful financial and manufacturing groups. It is very difficult for a new company to compete with General Motors Corporation in the electrical refrigeration field, with the Du Ponts in the manufacture of rayon, or with the Radio Corporation of America backed by the most powerful electrical equipment producers in the country.

Every new industry must go through a stage of experiment and adjustment. The more promising it appears, the more companies will come into the field. Severe competition, low earnings, and failure follow. Strong interests will buy into the most promising companies and probably consolidate them in an attempt to stabilize prices and adjust production to demand.

New industries spring up most rapidly in times of prosperity, often in the stage just preceding the crisis. These are almost sure to fail or to be severely crippled when the crisis and depression come. No investor for the long pull will put his money into new enterprises that start at such times.

It is not the province of the small investor to take part in financing new and untried industries. He can always find plenty of opportunities among well-seasoned compa-

nies. On the other hand, progress depends on risk taking. This should be one of the great social contributions of the man of wealth who can lose a million in an honest venture and have enough money left to try again and again.

Selecting the industry. When the investor is sure that the worst stage in the business cycle has been reached and signs of betterment are at hand, his next problem is to separate those industries which show the greatest earning power with the coming improvements in economic conditions from those which have been so damaged in the crisis and depression that recovery of the earning power will be a matter of some years. The factors to be taken into account in separating the sheep from the goats are somewhat as follows:

1. *Future demand.* There can be no prosperity in any industry unless there is a large demand for its product. In 1921 the probable future demand for its goods was one of the essential tests that investors applied to an industry. A company or an industry that had been considerably weakened during the depression might recover rapidly if only demand for its products was forthcoming.

The significance of demand is strikingly shown in the case of the automobile industry, where the facilities for manufacture seemed greatly overextended in 1921 but the demand for automobiles came in such huge volume that it dominated what seemed a very uncertain situation.

Mail-order houses and farm-machinery manufacturers did not prosper until a considerable improvement had taken place in the agricultural situation. The fertilizer and leather industries had excessive capacity and, furthermore, demand did not appear. They have had a very hard time. On the other hand, industries of all types closely connected with the construction business were soon called upon for large production and began to prosper without much delay.

The ability to estimate future demand is, therefore, one of the essentials in judging the future prospects of an industry.

2. *Capacity and overproduction.* During a period of prosperity some industries are always overbuilt. These are likely to be those that are the most prosperous in the prosperity phase of the cycle. The sugar, steel, copper, coal, textile, leather, oil, rubber, and agricultural industries are outstanding examples of tremendous capacity built up to meet war demands. Their recovery has been very slow. Capacity is so great and competition so keen that when any particular industry seems on the point of making larger earnings, production is increased and prices of the product cut. This has been true especially of the oils and coppers the last few years. The late A. C. Bedford, chairman of the board of the Standard Oil Company of New Jersey, in his annual report to stockholders said: "Excessive competition, arising from overproduction of crude, and the resultant overaccumulation of finished products, which has caused many of those products to be forced on the market at a price below their value, has seriously militated against the prosperity of the petroleum industry in the past four years," What has taken place in the oil industry takes place in all industries where great overproduction exists.

3. *Liquidity of resources.* Probably no one factor gives a better clue as to the ability an industry has to stand the severest test than the fact that the resources generally have been kept liquid. Some industries operate under conditions which make it very difficult to keep a proper balance between current assets and current liabilities. This is especially true of the item "cash." For example, the farm machinery and fertilizer industries sell their products to farmers on relatively long-term notes. When the prices on agricultural products broke because of overproduction, farmers' paper became non-liquid and as a consequence industries that had farmers' notes in large amounts in their assets suffered tremendously.

On the other hand, some industries, by the nature of their business, can with good management keep their resources

liquid and their cash large. Mail-order houses, packing, rubber, copper, fertilizer, and textile industries were caught with large inventories when the break came in 1920. It took several years to liquidate these inventories, and great losses had to be charged off. An industry, however, which came through the depression with its resources in a liquid condition was ready to take advantage of the next turn of events for the better. If the unexpected should happen, they were strong financially and could carry on.

4. *Stability of net earnings.* By their nature the net earnings of some industries are more stable than those of others. The earnings of railroads and public utilities are said to be more stable than those of industrial corporations. The steel industry is said to be either a prince or pauper; the oil industry is notoriously unstable; and luxury industries and new unseasoned lines are subject to many risks.

The conservative management of corporations in industries whose earnings are subject to fluctuations provides against wide variation in earnings by building up a large surplus or setting aside reserves for dividend purposes in lean years. For example, the United States Steel Corporation has accumulated a surplus of over $700,000,000, and the Standard Oil Company of New Jersey is said to put over 50 cents out of each dollar of net earnings back into the business. The Ford Motor Company has a capital stock of over $17,000,000 and a surplus of about $545,000,000. American Car and Foundry several years ago set aside a reserve for 3 years' dividends.

In the well-managed large companies a considerable amount of the assets are invested in a well-diversified list of securities. The reason is found in the importance of stability of income.

5. *Labor conditions.* Extremely high or unreasonably low wages, low efficiency of labor, lack of adequate labor supply, and a lack of cooperation may prevent an industry from forging ahead for years. The most progressive banks under-

stand the importance of proper labor conditions and are asking for a labor audit as well as an audit of the books of the concern. The investor should take similar precautions by studying labor conditions.

6. *Competition.* Some industries are more subject to competition than others. Notable examples of competition are found in the automobile and tire and rubber industries. A tire company cuts its price, and the stocks of tire companies generally are sold. Traders on the stock market watch every move of the automobile manufacturers to scent keener competition. New processes and machinery may revolutionize an industry and entirely upset all former values in it.

7. *Foreign trade.* The foreign situation must be a factor of perennial interest to a creditor nation. Industries depending on exports and imports will be particularly affected by changes in the foreign situation. An outstanding example on this point is the trouble the rubbers have had in recent years.

8. *Public opinion.* Since railroads and public utilities are regulated on every hand by the public, much depends on the attitude of the public. At present, public sentiment is, on the whole, favorable to both the railroads and utilities. The public seems settled on the question that rates shall be adequate. But what rates are adequate? If leading railroads earn $15 per share on their capital stock is not that evidence of exorbitant rate charges? There is always a large radical element present in society, as, for example, the farm and labor groups, and political leaders are ready, rightly or wrongly, to make the most of such a situation. The investor must be awake to this element of uncertainty ever present.

On the basis of the above points the investor should classify all industries into three classes: A, B, C. Into class A should go those industries that rank highest; into class B those that rank reasonably high, and into class C the rest.

When the investor now has decided that a long upward pull in business is just ahead accompanied by a like movement in the stock market and has ascertained the industries that are in a position to realize large earnings as soon as prosperity appears, those that will recover slowly, and those that are so badly hurt that it will take a long time for them to recover, if failure is not imminent, the next step is the selection of the particular corporation or company into whose stock it is wise to put funds.

SELECTING THE STOCK TO BUY

Some general principles. In selecting particular securities for constructive investment purposes certain general principles must be taken into consideration. The principles applying to the investment of funds are a part of the great body of economic principles and must be taken into account like the economic principles applying to other fields of industry and business.

1. *Select the best broker.* In a former chapter the qualifications of a good broker were pointed out. It is here only necessary to say that the best broker is none too good. The investor should not be satisfied until he has made connection with the best broker available. Consult with him, get his advice, and give him your business. He will not try to force his judgment upon you but will always want you to make your own final decisions.

2. *The stage of the business cycle.* During the period immediately preceding the crisis phase of the cycle the investor must get his assets into liquid condition to guard against distress later. He will sell his stocks and the bonds that are likely to be affected by the crisis. His new investments will consist of short-term bonds and notes that are readily marketable. He buys no stocks and especially none that are unlisted or whose market is created by their sponsors. During the period of depression and revival, the in-

vestor switches out of short-time and into the best long-time bonds. He also puts a considerable amount of his funds into bonds of higher yield and into stocks. He may even buy the stocks of semispeculative nature, such as those of new corporations or good companies that have been hard hit and have reduced dividends, or companies that have been reorganized, a procedure not at all to be allowed at the peak of prosperity.

Securities are at all times bought outright or well covered and none are carried through the cycle unless they are so sound that they are worth holding for years.

3. *Diversification.* Diversification and the law of averages are at the basis of the success of the well-managed investment trusts whether in England, on the Continent, or in the United States. The individual investor, as well as the institution, should put himself in line with this strong ally of safety of principal and certainty of income.

In the first place, many successful investors have two different funds: one fund for the purchase of first-class bonds to be held permanently for income; the other fund for the purchase of bonds or stocks that have promise of appreciation in price. The securities held in the first fund are intended to furnish a regular income; appreciation is not a primary factor.

Part of these bonds will have a high degree of marketability so that if need arises they can be readily sold. Again the investor will see to it that he has a substantial block of securities that can be readily pledged at his bank for loan which he may want to make from time to time. Marketability and high collateral value must be paid for in lower yield, but the insurance they furnish is worth all it costs.

The second fund is put into good stocks at the right time in the business cycle. These stocks are held for appreciation and sold. Part of the fund or all of it may be put into new industries or reorganized companies that give

promise of large future earning power. Such stocks are held year after year, regardless of the ebb and flow of the business cycle. We hear much about accumulation and distribution periods. Much, probably too much, has been said about such periods within the pages of this book. The fact is that in all the promising companies, small as well as large, large amounts of stock remain in the hands of people who believe in their company and expect to share liberally in its growth through the years. This is most certainly true of the great railroads and industrials whose securities are widely held by investors. It is only certain margins of stock, relatively large at times it is true, that are taken off the market or that come upon the market, creating the so-called periods of accumulation and distribution.

The smaller the amount of funds available for the purchase of securities, the larger relatively should be the fund set apart for the best bonds. On the other hand, the larger the investment fund, the larger relatively the second fund may be.

Next, diversification should be by industry. The forces that injure one industry may aid another. For example, a substantial rise in the commodity price level may diminish net earnings of railroads and public utilities, whose rates are fixed by public authority, but may be the basis of great prosperity on the part of industrials.

Geographic distribution is a third element. While industries in the eastern part of the country are depressed, those farther west may enjoy great prosperity, or vice versa. An investor in textiles would want part of his funds invested in plants in the South. Again, geographical distribution may apply internationally. Not all parts of the world are affected the same way at the same time.

The principle of diversification also applies to different plants of the same industry. For one reason or another, different plants in the same line do not fare equally well in the shifting and adjusting that is going on in the economic

organization at all times. The effect of this flux is difficult to foretell. The answer is, "diversify."

Every investor should have a definite plan of distributing his funds among industries, localities, and plants. He must not invest in more enterprises than he can constantly keep abreast of. If he can keep in touch with only a few, then he should not scatter his funds over a wide field. No investor should let any security salesman break into his diversification plans. Moreover, diversification can never take the place of sound values, which are to be had only by careful analysis and unremitting vigilance on the part of the security holder.

4. *Marketability.* The trader who operates on the short swings and the tape reader find a continuous market with narrow spreads between bid and asked prices imperative. This is not as fully true of the constructive investor, but even he must see to it that a large part of his stock investments have a high degree of marketability so that he can sell quickly without breaking the market or taking a loss. Furthermore, marketability adds much to the collateral value of securities for loans. It is a quality that adds materially to the value of the holdings to the careful trader and investor. It must be carefully watched and provided for.

5. *Adequate reports.* The investor cannot work intelligently unless he has access to full information regarding the operations of his company. The time has come when corporations should feel their responsibility toward their stockholders, creditors, and the public in the matter of furnishing full accounts of assets, liabilities, profits, losses, statistics of operation, plans for the future, competitive conditions, vital changes in the industry, in brief, all the information essential to forming a complete picture of the situation as to the corporation. No stockholder wants his company to make public data that would injure its business in competition with other plants. As a matter of fact, there is

much less of this privileged information than is usually supposed. What were thought necessary secrets 10 years ago are now freely exchanged among business executives and largely available to the public. No one would deny that this evolution will cease.

The New York Stock Exchange has for years insisted upon complete reports from corporations. Much has been accomplished, but as has been pointed out again and again by the Exchange authorities and the leading financial papers, the information is still very incomplete. Professor Ripley's writings in the *Atlantic Monthly* have shown specific cases of inadequate and even misleading statements by corporations. He has merely restated in more striking phrases and with more vigor of manner what has been reiterated and in part enforced by the financial press and the Stock Exchange.

Investors should insist on full information before investing. The management of a corporation which does not respect the owners of the concern to the extent of keeping them well informed should not expect to have the most intelligent body of stockholders on its stock list. Of the industrial corporations the United States Steel Corporation has been the leader in making complete statements. Not only are full annual financial and income statements made by the Steel Corporation but a complete statistical record of operations for the year is given. Earning statements are made each quarter, and on or near the tenth of each month a statement of unfilled orders is made public. The percentage of operation to capacity is made available to the press at frequent intervals. Many other industrial corporations are following the example of Steel, and time will bring the remainder into line.

The Interstate Commerce Commission requires the railroads to make complete financial and operating statements. Earning statements are made monthly and car loadings weekly. The investor in the railroads has available for each road the data essential to a judgment of the condition of the

road in so far as financial and statistical reports can give them. It must be said, however, that recently the truthfulness of some of the reports has been questioned on the point of the real value of assets of the specified roads.

6. *Relation of gross to net earnings.* Economists some years ago saw that in industries which have large fixed expense a relatively small decrease in gross earnings, other things remaining practically the same, will cause a relatively large decline in net earnings. On the other hand, relatively small increases in gross earnings will make a relatively large increase in the net earnings.

Most large industries by their nature must have large investments in land, buildings, and equipment. Besides these they have built up an expensive organization of men both to operate the plant and to find a market for the product. Though business declines, the plant and the staff, in large part, must be maintained, and interest on indebtedness must be paid. Suppose a plant is operating at a rate which provides for total cost but does not yield a profit. Now an increase in gross revenue can go almost wholly to profits. Possibly some additional labor must be hired and some more equipment bought, but this variable expense will be relatively small when compared to the large fixed costs. A small increase in gross earnings will make a large percentage of increase in the net earnings. Conversely, when a concern is making a reasonable profit, a relatively small decrease in gross will wipe out all profits. Any business with large overhead and fluctuating demand is particularly subject to this economic principle, and the stocks of such a concern will fluctuate widely.

7. *New corporations.* The cautions that were expressed concerning new industries apply as well to new concerns in old industries. Any new concern must go through its experimental and adjustment stage. Furthermore, it takes some time before a new production unit can find its place and be assimilated by the market.

When, however, there is a place for a new production unit, the management is experienced and aggressive, the product is as good as or better than any on the market, and a strong financial group is backing the enterprise, the investor for the long pull may find the stock of such concerns most profitable.

However profitable investment in new companies may occasionally be, it is a fact that the most money is made in the old, well-tried companies. The growth of established corporations affords the surest and, on the average, the largest opportunities for profit. The spectacular and sensational is weighted heavy with risk and loss. United States Steel could have been bought for less than 71 in 1921 and sold at 159 in August, 1926; Pennsylvania Railroad rose from about 32 to about 56 in the same period.

8. *Inventions and new processes.* Science is forging ahead and inventions and new processes are of frequent occurrences. Some will revolutionize a whole industry, others will be failures. Methanol and wood alcohol came on the market, and great industrial plants that had not been prepared almost went into bankruptcy before they could be adjusted. Paint and varnish business is revolutionized by the discovery of the lacquers.

Bankers, in making their credit ratings of industrial concerns, are asking what is ahead in the line of inventions. Ten years ago a certified public accountant's report as a basis for credit was a novelty in many quarters. Today banks expect them; they also expect appraisals by approved appraisal companies. The next 10 years will mean technical surveys by engineers as to present processes in use compared to what the future is likely to bring. The investor must not be less watchful than the banker.

The trader on the short swings needs to look ahead for only relatively short periods, but the investor who puts his money into securities for the long pull should be especially wide awake. What is ahead may make or break him.

CORPORATION REPORTS AND EARNING POWER[1]

Since the value of stocks depends primarily on earning power, and since the earning power which is of predominant significance is that of the future, the investor and stockholder must find means of judging future prospects.

The analysis and interpretation of corporation reports is one of the chief means of determining future earning power. These reports give the financial set-up, the trend of operation, the trend of earnings, the value of the assets, and much as to the ability and the policies of management. When these are known, a body of facts significant for future earnings is at hand. There is, however, always the danger that corporation reports may be given too great weight. They are but one important source of information.

Corporate reports may be classed into two categories: (1) those that give the financial situation, and (2) those that give the details of the physical plant, equipment, and operation. We are here interested primarily in the first type of reports, the most essential of which are the financial statement and the income account. The financial statement lists the assets and liabilities of the company in terms of dollar values; the income account records the different items of income and expense, dividends paid, amounts set aside for reserves, and the amount carried to surplus. For the purpose of the stockholder, that is, the prediction of future earnings available per share, the financial statement is the more important. The income account is supplementary to the balance sheet.

The capital structure. The stockholder is interested in the net income available for dividends per share of stock. If there is a great amount of bonds and preferred stock in the capital set-up, according to the principle that in corporations with large fixed expense a relatively small decline

[1] See Bliss, J. H., *Ratios of Management;* Lagerquist, W. E., *Investment Analysis,* pp. 51-95, 245-313, 455-469; Kirshman, J. E., *Principles of Investment,* pp. 221-227, 434-498, 597-630; Wall, Alexander, *Analytical Credits.*

in gross income will cause a relatively large reduction in net income, a relatively small decrease in business will result in the passing of dividends on the common stock, if not also on the preferred. Corporations whose gross earnings are liable to fluctuations of substantial amounts should have relatively small amounts of bonds, if any at all. Most industrials fall into this class. United States Steel has a funded debt of less than 25% of its total capitalization; Standard Oil of New Jersey has no bonds, about $200,000,000 preferred, $507,000,000 common, and over $274,000,000 surplus; General Electric has only about $18,700,000 funded debt and $26,700,000 preferred stock in a total capitalization of about $298,000,000; E. I. du Pont has only $11,850,000 funded debt and somewhat over $68,000,000 preferred to a total capitalization of over $267,000,000; F. W. Woolworth has no funded debt at all. Railroads with more stable earnings than industrials usually have a relatively large funded debt. The Atchison, Topeka and Santa Fe has a funded debt of about 30% of its total capitalization of over $907,000,000; the Pennsylvania has a funded debt of about 42% of its total capitalization of over $1,469,000,000; and New York Central has somewhat less than 60% of its total capitalization in funded debt. All the great industrials and rails have built up great surpluses and are still increasing them rapidly.

A graph of the ratio of net worth to funded debt for a series of years will enable any one quickly to determine the indebtedness policy of the management. The ratio for each year is found as follows: (1) Find the total value of the common and preferred stock and surplus and from this total subtract intangible items like good-will, patents and processes, and so forth; and (2) divide the remainder by the total of all funded debts. The ratios for a series of years are then plotted, and the resulting curve is a good index of the indebtedness policy of the management. The common stockholder ordinarily prefers to see the bonds and preferred stock decline.

The next point is the number of shares of common stock issued. If the number of shares is extremely large relative to the earnings, extremely large relative increases in net income must be forthcoming before such increases mean much per share of the stock. When a company has millions of shares, net earnings must increase by millions of dollars before they are of much significance per share of stock. If such earning power is doubtful, not much appreciation in the value of the stock can be hoped for, to say the least.

The analysis of a railroad report is not complete without a statement as to the amount of securities outstanding per mile. If bonds and preferred stock have been issued in excessive amounts, the common stock is in a poor position. Again, if an excessive amount of common stock is outstanding per mile, earnings must be extraordinary before there can be much increase in dividends per share. A comparative study of the per mile outstanding securities of roads similarly located will soon show which are to be preferred.

The critical nature of the financial structure of a corporation is evident in time of trouble. In a reorganization the element of fixed expense is reduced by converting bonds with fixed interest rates to income bonds or preferred stock, and preferred stock to common. In other words, a reorganization rearranges the capital set-up so that fixed charges are greatly reduced and a larger percentage of the obligations of the company become contingent upon earnings. The difference between success and failure often lies in the heavy burden of fixed charges, as is shown by the fact that after reorganization, the same management carries the company to success.

Net income available per share. The simplest method of finding the number of dollars available per share of common stock is to add the amount paid in dividends to the common stock to the amount carried to surplus and divide by the number of shares of common outstanding. By a comparative study of the income statements of the past five years

the trend of income available is ascertained. The study of past years should include, where possible, panic and depression years. If the company was able to earn its dividends throughout the last depression and if the present trend is upward, the company should be in a strong position.

The investor may not be sure that net income shown in the income account is real. If the income statement shows that adequate amounts have been charged off for depreciation, bad debts, intangibles, and so forth, and proper amounts added to the reserve accounts carried as liabilities, then net earnings as shown should be actual as well as on paper.

Another method of finding earnings available per share of common is to compare the successive balance sheets of the company. Find the total value of the common stock, the preferred stock, and the surplus for the past year. Subtract the preferred stock. Next, make the same computations for the preceding year and take the difference between the results for the two years. To the difference add the amount of the last year's dividend and divide the sum by the number of shares common. This method of ascertaining net income takes into account both appreciation or impairment of capital and profit or loss from operation. Again, if, for example, good-will is carried at $50,000,000, as was done by Woolworth prior to 1922, and is marked down to $30,000,000, surplus will be reduced, and though the income statement shows $10,000,000 net earnings, surplus will be $10,000,000 less than the preceding year. Similarly, if reserves carried as liabilities should be greatly increased, the surplus would be diminished. The stockholder is not deceived by the balance sheet though the income statement might lead him to expect that a large amount was available for dividends. Of course, his company is being put into a better financial condition and he will reap the results later.

The question of depreciation and maintenance is always up when net earnings are to be considered. The financial statement and income account may show large net earnings,

but the reason is that the provision made for depreciation and maintenance is inadequate. Comparisons on these points with other successful companies of like nature and location will give the investor a good idea as to the policies of the management of the corporation at interest.

An old rule-of-thumb requirement is that earnings available for dividends shall be twice the dividend requirement over a period of years. This means that the company is conservative in its dividend policy and is building up a surplus at the rate of one dollar for every dollar paid in dividends.

When the investor has finally decided upon the actual number of dollars that are earned and available for dividends per share, he wants to be sure that such earnings compare favorably with those of other successful concerns in the field. The company under analysis may earn $9 on common stock, but other companies are found to earn from $12 to $15. The management may be poor, the company may be overcapitalized, the plant may not be located properly, machinery may be obsolete, and so forth. If no justification for comparatively low earnings is forthcoming, the investor is wary.

Much depends upon the trend of earnings. A company earning $5 per share with improvement certain would be preferred to a concern with large earnings per share but the trend of earnings downward. This is a point given much weight in Poor's and the Standard Statistics Company's ratings. Again, if the earnings of the best plants in the industry are tending downward, it is more than probable that any particular plant will feel the effect of the same unfavorable factors.

A good method of studying earnings is to make a chart consisting of a curve representing the number of dollars available for dividends per share of common and a second curve representing the dividends paid. Both curves should begin before the depression of 1920-1921, if possible. The space between the curves can be cross-hatched, using black

ink when the number of dollars available per share is larger than the number of dollars paid in dividends per share, and red ink when the number of dollars available is smaller than the number of dollars paid per share. These two curves show at a glance the trend of available income and dividends; the dividend and surplus policies of the management; and how the company fared in time of a crisis and depression.

Liquidity of assets. The investor wants to know that income available for dividends is satisfactory. He also wants to know that the assets of the company are so liquid that dividends can be paid in cash and that there is plenty of working capital to carry on the business so as to maintain income at a high level. The items listed on the balance sheet under assets are commonly classed as current and permanent or fixed. The items listed under liabilities are of two general kinds, those that represent the proprietorship interest in the company and those that represent creditors' interests. These latter are again divided into current or quick and permanent or slow.

From the point of view of the investor, current assets should include all items which can be turned into cash in a relatively short time, and current liabilities should include all items which may call for payment relatively soon. Current assets then will include cash accounts and notes receivable that can be collected, inventory that can be sold, commercial paper, government obligations, and other securities with a wide ready market, and interest and dividends that will be received on investments. Current liabilities will include accounts and bills payable, accrued expense items like wages and taxes, interest on funded debts, payments to sinking funds, certain contingent liabilities, and bonds and notes maturing within the year. This latter item need not be included if the company's credit standing is such that the bonds and notes can be refunded conveniently.

1. The current ratio was formerly looked upon as a proper indicator of the liquidity of the current assets of a company. If the ratio of current assets to current liabilities was 2 to 1, then liquidity of the current assets is a fact. It has been found, however, that no fixed ratio can be set down. The 2 to 1 ratio is adequate for some corporations and industries but not at all for others. Again, it may be quite adequate at one phase of the business cycle but entirely too small at another phase. The greater the fluctuation in earnings and the greater the risk, the greater should be the current ratio. Comparison with other companies in the same industry and a study of the trend in the company in question and in the industry will show whether an adequate current ratio is maintained and the trend in the industry.

An easy method of getting a comparative view of the trend of the current ratio is to plot a curve of the ratio over a series of years. Do the same for several other successful companies of the same nature, and comparison is simple.

It occasionally happens, however, that the current ratio is large, but there is no cash to pay dividends and no liquid working capital available. Further analysis must, therefore, be made that supplements the current ratio. At least four questions must be answered: (1) Do the current assets show sufficient cash? (2) Are collections on receivables easy or slow? (3) Is the inventory turnover what might be expected? (4) Is available working capital adequate?

The cash item should always be at least ample to take care of all interest charges and dividends, including any special demands for cash. The stability of earnings, the ease of collections, and the phase of the business cycle just ahead will condition the amount of cash held at any time.

An index of the cash position may be computed by dividing the cash by the current liabilities. This ratio should be computed for a series of years and plotted. The result of years compared with similar graphs for like companies will show the trend of the particular company and in the industry.

A collection index is made by dividing net sales by the receivables. This index gives the turnover of receivables each year. A graph of this figure for a series of years indicates the trend. Comparison with similar graphs for other companies of the same nature will indicate the situation in the industry and in the plant under analysis.

The liquidity of the inventory item may be judged roughly by making a curve showing the inventory turnover within a given period of time. Divide the net sales for the period by the average inventory. A graph of this ratio for a series of years compared with similar graphs for like companies will give at a glance what may be expected of any given plant and the trend both in the company studied and the industry.

If cash is ample, inventory turnover all that might be expected, and the collection index high, the liquidity of the current assets seems beyond doubt. When, then, the current ratio is high, there will be funds to pay all current calls for funds, to provide working capital, and to pay dividends, provided net income has been as might be expected.

The efficiency of operation. The investor wants to know how well the management is employing the assets of the company. If the assets are well employed and the management is good, the outlook for earnings to continue at the present or at a better rate is excellent.

On the point of efficiency of operation, the investor wants to know (1) that the operating expenses do not consume more than a reasonable share of the gross revenue; (2) that working capital is kept in proper relation to fixed capital for efficient production; (3) that fixed capital is efficiently employed; (4) that the capital contributed by the stockholders is well handled; and (5) that the property is adequately maintained.

1. A corporation that spends more than it makes must go to the wall sooner or later. The percentage of gross revenue used to defray expenses thus is an essential ratio.

It is known as the operating ratio and applies alike to industrials, railroads, and public utilities. Gross revenue includes all returns from operation. The items which are included in operating expenses are well standardized for the railroads as (1) maintenance of way and structures, (2) maintenance of equipment, (3) transportation expenses, (4) traffic expenses, (5) miscellaneous, and (6) general expenses. In the case of industrials and public utilities there is no such standardization of accounts.

The operating ratio of the railroads during the World War was very high. In several of the great railroads 95% to 100% of the total operating revenue was consumed by operating expenses. Class I railroads now operate at a ratio under 75%.

Since depreciation and maintenance are items of operating expenses, a low operating ratio may show that proper amounts have not been written off for depreciation or spent for upkeep instead of efficiency of operation as might be expected. These items must be carefully noted. Roads vary as to maintenance costs with density of traffic, the bulk and weight of traffic, and the territory traversed. On the average, from 30% to 45% of gross revenue goes into maintenance. About 30% to 50% goes to pay traffic, transportation, miscellaneous, and general expenses. The operating ratio of electric railways is about the same as that of the railroads. Each industry has its own peculiar conditions, and a given concern must be studied in relation to past years and to other plants. The method of using curves to represent the ratios year by year is very effective.

2. Working capital is one of the vital factors in the progress of an industrial or business concern. One of the great hindrances to the recovery of industry in Germany has been the lack of liquid working capital. By working capital is usually meant the excess of current assets over current liabilities. If the margin is small, it can be easily reduced to a non-operating basis. The amount of working capital

needed depends on the gross sales, the rapidity of turnover of inventory, of receivables, and the probable need for funds for other purposes.

The working capital policy of the company can best be studied by finding the ratio of net worth to fixed assets for a series of years and comparing these figures with similar figures of other companies. In the above ratio, since net worth is divided by fixed assets an increasing ratio shows that the working capital is being increased relative to the fixed assets. The ratio of working to fixed assets varies greatly from such industries like the steel industry, where the ratio is relatively small because of the large plant and machinery required, to the tobacco industries, where fixed assets are relatively small compared to working capital.

3. Fixed capital must be profitably employed. The ratio of gross revenue to fixed assets compared with the same ratio of past years and the same ratio of other like companies will classify a given concern. If the ratio is below that of other concerns and, perhaps, shows a downward trend, whereas the industry shows an upward movement, the investor should see danger ahead. Sometimes earnings are put into fixed assets, or bonds and stocks are sold for extension purposes. The ratio of sales to fixed may decline for a time but sooner or later should come back to its former position and should even improve, otherwise the fixed property is too large for the business available under present methods, or the proper relationship between fixed and working capital has been destroyed.

4. The turnover of the capital contributed by the stockholders is of interest as revealing earning power and adequacy of management. Find the ratio of gross revenue or net sales to net worth over a series of years. If the ratio shows an upward trend and is better than the average for other comparable companies, the management is doing well with the funds contributed by the stockholders. Net sales or gross revenue should show consistent improvement.

In the case of railroads, the operating statistics which form a background against which the financial ratios may be judged are as follows: (1) traffic possibilities, (2) average car load, (3) average train load, (4) passenger and freight density, (5) average train-mile earnings, (6) the number of miles traveled per car per day, and (7) cost of transportation. The units used in studying comparative railroad statistics are the mile, the car, the ton, the train, the locomotive, the passenger, and their combinations. Two railroads cannot be compared unless some unit is used for both roads. To say that one road carried more tons of freight than the other means little. Comparable figures are the ton-miles, that is, the number of tons carried a distance of one mile. We have, thus, the miles of road, the car-mile, the ton-mile, the train-mile, the locomotive-mile, and so forth.

In studying the traffic of a railroad, the ratio of passenger traffic to total traffic as compared with the ratio of freight traffic to total traffic is noted. Freight traffic is commonly the more profitable. Again, high-grade traffic is more profitable than low-grade. Diversification of traffic is always sought. A road carrying a variety of commodities covering manufactures, merchandise, and products of agriculture, animals, mines, and forests is meeting the conditions of stability of traffic so much desired. When agricultural and animal products predominate, an effort should be made to secure more of the products of mines and more manufactured goods. A study of traffic includes the future as well as the past. The specific points to be considered are the future possibilities of the territory to produce large tonnages of a variety of commodities and the ability of a growing population to buy many types of goods.

The average car load in tons shows whether the full capacity of cars is being utilized. Many cars may be moving empty because traffic moves one way with no return of business.

Heavy trains are not much more expensive per mile than

light ones. High passenger and freight density per mile indicates a high degree of use of plant and favor high earnings. Average train-mile earnings are one of the best indicators of management and of the income of the road. The average miles traveled per car per day, together with the tonnage carried, are also significant of the employment of plant. In comparing these items with those of other roads the average length of haul, the amount of branch line, and so forth, must be allowed for.

The cost of transportation runs from 30% to 50% of gross revenue. In 1925 Southern Railway spent 33.4% of its gross revenue for transportation costs compared to 30.7% by Atchison. The difference, however, is in part accounted for by the fact that the average length of haul was 182 and 324 miles, respectively. On the other hand, Atchison had to pay 35.3 cents for fuel per locomotive-mile compared to 18.2 cents by Southern. Delays at terminals, branch lines operated, origin of traffic, long or short hauls, and so forth, make a great difference in costs of transportation.

In all these analyses it must always be remembered that no one item can be taken as final. Each is supplementary to the others; it takes all to make the completed picture.

5. The earnings must be maintained; therefore, the property must not be allowed to deteriorate. The standards of maintenance for railroads have been mentioned. Not only the percentage of gross revenue consumed in maintenance but also the amount of money spent per mile of road as compared to the amount spent per mile by other roads is significant.

Other items of operating statistics that may be used to check maintenance figures in the income statement are: (1) expense of locomotive maintenance per locomotive-mile; (2) freight-car maintenance per car-mile; (3) unserviceable locomotives and cars; (4) increases or decreases in the number of locomotives and cars and changes in type; and (5) the maintenance of roadway and structures.

When expense of locomotive and car maintenance is compared with previous years and with other railroads, allowance must always be made for differences in the amount charged to depreciation and retirement per locomotive-mile and per car-mile. In the case of locomotives the average train load must also be considered. For example, in 1925, locomotive maintenance per locomotive-mile on the Southern Railway was $24.51 compared with $31.31 for the same item on the Atchison, but depreciation and retirement per locomotive-mile amounted to $1.74 on the Southern and $4.95 on the Atchison. Besides, the average train load on the former road was only 521 tons against 670 tons on the latter.[2]

Only a small percentage of locomotives and cars should be unserviceable. The more modern types should be on the increase and the number per mile of track should compare favorably with that on other roads. The number of new ties used and the weight of new rails laid with new bridges and other structures built give something of an idea of the maintenance of way and structures.

Depreciation, including obsolescence, of public utilities runs from 3% to 5% on plant and equipment. The depreciation on industrials varies with the industry; no standard amount can be given. When the maintenance and depreciation items are being provided for properly, adequate reserves maintained, reasonable deductions in intangible assets made, and the surplus built up year after year, the property is most probably in good condition.

The property behind the securities. From the common stockholders' point of view, what is there in the assets of the company of real value behind the stock? Very often the bonds and preferred stock represent all the tangible value there is, the common only representing control and prospective future earnings. An analysis of the balance sheet is of some aid in answering our question, provided an

[2] *Wall Street Journal,* September 8, 1926.

audit has been made by a recognized firm of accountants and appraisals are recent and conservative.

We have already analyzed the current assets. Here deductions must be made for bad debts, cash must be scrutinized, and inventory must be valued at cost or the market, whichever is the lower. Next, coming to fixed assets, the items good-will, patents, and so forth, should be cut to a minimum. General Electric carries its good-will and patents at $1. Conservative practice dictates that fixed property like land, buildings, and equipment should be carried at cost less depreciation. A comparison of these items over a series of years will give some conception as to the depreciation policy and the policy of writing up assets when market values rise. If depreciation is very irregular from year to year, this item should be especially looked into.

The investment account is an uncertain item. Part of the securities may have a ready market at prices easily ascertainable, others may be issues of subsidiaries whose value is uncertain. A holding company, if conservative, will carry securities of subsidiaries at cost. The investment item should be conservatively valued.

The value of leaseholds is found by capitalizing the annual rental and writing off an amount each year so that the total value is written off when the leasehold expires.

After having made all reasonable reductions in the assets of the corporation, the liabilities, exclusive of proprietorship accounts, are subtracted from the total adjusted value of assets. The remainder is the value behind the common and preferred stock. Subtract the amount of the preferred stock, and the value behind the common stock appears. This value, divided by the number of shares, roughly measures the asset value behind each common share.

Throughout this discussion the corporation has been considered as a going concern. What liquidating values would be depends largely on the type of industry and the phase of the business cycle current at the time of liquidation.

THE PRICE OF STOCKS

What price shall an investor pay for a given share of stock? The answer to this question is that unless the investor for the long swings or the long pull is about to turn trader for the minor swings, he should not buy stocks at all except in the depression and revival periods. There are exceptions to this rule as to all rules. For example, sometimes a company is severely hurt in a depression but gradually manages to adjust its financial structure, liquify its assets, and increase the efficiency of production so that earnings begin to rise. Now, if the investor is sure of his facts, he may buy the company's stocks at a late date in the cycle and expect the market to discount the good management and earnings before the prosperity period closes.

By proper analysis of the securities of many companies, they can be rated as A, B, C, and D with reference to present and future earning power. Now, if the stock of a company in Class A of a given industry is selling at 8 times the income available per share and the other companies in Class A are selling at 12 times the income per share, the company in question is behind the market and might be preferred to the other companies by the investor in the early stages of a business cycle or by a trader for an advance at most any part of a bull market. This evening up among stocks is going on at all times in the market.

Badger, in his studies of the valuation of common stocks, divides them into four classes, as to the degree of risk involved. He finds that in case of the "low risk" group the net income available per share averaged over a 10-year period roughly from 12% to 14.99%; the "medium risk" group, 15% to 19.99%; the "high risk" group, 20% to 24.99%; and the "very high risk" group, over 25% of the market price.[3] The stock of a company of the best group should sell from 6 to 8 times the number of dollars available per share. Nothing final can be attributed to these

[3] Badger, Ralph E., *Valuation of Industrial Securities*, p. 123.

figures, for many modifying factors always exist and must be taken into account. For example, United States Steel sold as high as 139¼ in November, 1925, when income available for 1925 was but somewhat over $8, about 6% of the market price. At the high of nearly 160 in August, Steel was selling at about 10 times its 1926 earnings per share. The fact that at the high of 1925 the price was over 16 times the earnings per share as compared with 10 times the earnings of 1926 is good evidence that the 1925 price discounted the expected excellent earnings of 1926.

The book value of stock is often supposed to form a basis for the judgment of the value of a share of stock, but it is perfectly evident to one who compares book value and market value that the market does not value stock on the basis of its book value.

Book value of the stock of a corporation usually refers to the value of the assets behind each share of stock as carried on the balance sheet. Book value may be found by adding the par value of the common stock and the surplus and subtracting reserve accounts found in the assets—for example, deferred expenses and bond discount. If the intangible items are not carried conservatively, they should be cut down very materially and the amount deducted subtracted from the proprietorship accounts before the deferred items above given are subtracted. An example follows:

Common stock ($100 par)		$1,000,000
Surplus		500,000
		$1,500,000
Less deduction for good-will, etc.		200,000
Net proprietorship		$1,300,000
Less deferred items	$150,000	
Bond discount	50,000	200,000
Total book value		$1,100,000
Book value per share		110

Well-seasoned stocks with large, conservatively carried assets behind each share usually sell in the market at a price much below their book value per share. On the other hand,

the stocks of corporations with relatively small assets behind the stocks, but with large present and large expected earnings, often sell far higher than their true book value. Badger found that 21 representative stocks for the period 1915-1921 sold, on the average, at somewhat less than 50% of their book value.[4] United States Steel is one of the outstanding examples of the futility of attempting to judge market value from book value. In 1910 its book value was 144 and the market price was high at 91 and low at 44; in 1915, book value was 150 and the price high at 89 and low at 50; in 1920, book value was 260 and the price high at 109 and low at 71; in 1925, book value was 280 and the price high at 139 and low at 112. The motors have been prosperous and are selling above their book value. At the beginning of 1926 Chrysler was selling about 6 times its book value; General Motors had a book value of about 70 and sold as high as 149 in November of 1925; 10 motors were selling on the average over 2 times their book value.

The confusion that would result from attempting to judge market value on the basis of book value is illustrated by a study of the motors at the beginning of 1926. The common stock of Paige had a book value of over 55% more than that of Chrysler common, but the latter sold twice as high on the market; the book value of Nash common was between 9 and 10 times that of Reo but sold between 18 and 20 times as high; and the book value of General Motors common was somewhat over 40% greater than that of Studebaker common, but the market price of General Motors common was over two times the price of Studebaker.

No one can tell how low the price of a share of stock will go in time of depression nor to what height the price will mount in time of hectic prosperity. The low point of stocks in general will go to perhaps 12 to 15 times the dividend paid; the high to 20 to 25 times the dividend paid. Any individual stock will be adjusted by the market to the general price level according to its earning power and asset

[4] Badger, Ralph E., *opus cit.*, p. 145.

value and the rate at which earning power is capitalized by stocks of like intrinsic merit.

The low price will be reached when substantial signs of recovery in business appear. From this point on the price is made day after day by changes that are favorable or adverse to business and financial conditions. The price today is yesterday's price modified by the estimate of many people of changes of conditions. There are playing on the market at all times broad fundamental, seasonal, and incidental forces. Besides these there is the market structure itself which is a very definite factor at times. The fundamental forces arise out of business and finance and give the price level its trend; the other forces modify the general trend by producing temporary reactions and rallies. If the market price advances more rapidly than business conditions improve, after some time a reaction will readjust the price of stock back to a percentage of increase that corresponds to the estimated advance in earning power because of business improvement. The price of any particular stock having advanced more rapidly than the general movement, considering its earning power, will have a reaction to adjust it to the market.

It must not be forgotten as has been mentioned before that the movement of any individual stock depends considerably on the financial interests behind it. Powerful financial backing is of first-rate importance to any corporation. These people will take every advantage of substantial improvement in earning power and will push the price of the stock ahead.

In a bull market, again, no one can tell the limit. Psychological factors play no unimportant part at the peak. No analysis of corporation reports will give any clue as to their effects. But the investor has a good profit, if he bought early in the cycle, and need not take a chance on them. A number of means of forecasting the coming of a turn downward were given in a former chapter. Investors do not, as a rule, operate on the short side of the market.

APPENDIX

STOCK MARKET TERMINOLOGY

STOCK MARKET TERMINOLOGY

Account. In London, stocks are commonly bought "for the account," that is, they are to be paid for at the next settlement. In this country, a customer who has sufficient margin with his broker orders him to buy for his account.

Account and Risk. When a customer gives a broker an order to buy, it is understood that the customer holds himself responsible to pay for the stock and agrees to relieve the broker of all risk of loss unless such loss is due to the broker's negligence.

Accumulation. The stock of a company is said to be under accumulation when it is bought by investors, by a pool, or by industrial traders for a future advance in price.

Arbitrage. The process of buying in one market and selling in another, presumably at a higher price. The term is also applied to certain types of transactions in the same market, for example, a trader buys the convertible bonds of a company and sells the stock into which the bonds may be converted. The bonds, after conversion, furnish cover for the sale of the stock.

Asked Price. The price at which stocks are being offered for sale.

Assessment. The security holders of a corporation are called upon to pay a given sum of money into its treasury. Assessments often occur at reorganization.

Assignment. When an owner of certificates of stocks or bonds transfers his rights in the certificates to another by indorsing an assignment blank, the transfer is known as an assignment.

Assignment Blank. The form on the back of a stock certificate or bond certificate that is not registered. Before ownership of such a certificate can be transferred from one person to another, the assignment blank must be properly indorsed.

Assignment in Blank. When the owner's signature appears on the assignment blank, the assignment is in blank.

At the Close. To buy or sell at the close means that the broker shall pay the last offering price or accept the last bid price at the close of the day's business. The offering in a public manner to buy or sell securities "at the close" is forbidden on the New York Stock Exchange.

At the Opening. The broker buys or sells at the opening of the market at the best quotation he can secure.

Auction Market. Stocks and bonds of various classes and descriptions, usually unlisted, are sold at auction on Vesey Street, where salesrooms are located. This is the auction market.

Authorized Capitalization. The maximum amounts of stocks and bonds which a corporation may issue. Only by consent of the stockholders can these amounts be changed.

Averages. See "Stock Price Averages."

Averaging. A trader may "average down" the cost of his stock by buying stock as the market declines or "average up" the selling price by selling shares as the market advances.

Backwardation. When a broker who borrows stock in London has to pay a premium to the lender, the premium is known as backwardation.

Ballooning a Stock. To work the price of a stock to fictitious heights by spreading rumors and manipulating sales.

Bear. A trader who believes the price of stocks will decline and sells.

Bear Crowd. The professional bear traders as a group.

Bear Drive or Raid. The bears as a body make strenuous attempts to force certain stocks down. They suspect stop orders beneath the market and attack weak stocks. Again, they raid the bulls by selling the stocks which the bulls hold in large amounts.

Bear Panic. The bears are in a panic to buy stocks to cover their short sales.

Bear Pool. A pool organized to manipulate certain stocks to lower prices.

Bid Price. The price which is being offered for stocks.

Big Board. The term refers to the New York Stock Exchange.

Blind Pool. A pool organization in which the members have no voice in management. The manager is given full authority to operate as he sees fit.

Board Room. See "Customers' Room."

Bob-tailed Pool. A small pool organized for making a quick turn.

Books Close. Books here mean the stock transfer books. When the books close, no changes in the list of stockholders are made until they

are opened, probably a week later. The books are closed when a cash or stock dividend is declared, rights are issued, or a meeting of the stockholders called. The names on the list at the time of closing are considered eligible to the privileges being granted. Many corporations do not close their books but take the list of stockholders as it stands at a given hour of a specified day. The New York Stock Exchange favors this plan.

Book Value. The book value of a share of stock is the value behind a share of stock as represented on the books of the company. There is no definite relationship between book value and market value.

Bourse. The name commonly given on the Continent to stock exchanges.

Brokers' Loans. Loans to brokers on security collateral. The loans may be call or time loans.

Bucket-shop. A broker's office where the "house" takes the side opposite that taken by the customer. Since most people go long on stocks, the house, in taking the opposite side, agrees to deliver at a later date. In a bull market this means loss on the average to the bucket-shop. In a declining market, bucket-shops prosper.

Bulge. A sharp but small advance in the market.

Bull. An investor or trader who believes the prices of stocks will advance and buys stocks.

Bull Contingent. The professional bulls considered as a group.

Bull Market. A market whose major trend is upward.

Bull Pool. An organization of traders or investors for putting the price of a given stock up. The aim is to put the market up by buying and, when the public comes in, to sell out at a profit.

Business Barometers. These are statistical devices used to predict business conditions from a few months to several years in the future.

Business Cycle. A business cycle consists of a depression period, a revival period, a prosperity period, and a crisis period in business. These cycles usually last from three to five years.

Buyer's Option. Options may be taken on a given stock for from 4 days to 60 days. In buyers' options the buyer has the right to call for the stock on which he has an option at any time within the life of the option. Sellers' options give the seller of the option the right to deliver the stock at any time within the life of the option.

Buying on Scale. When a trader or investor gives his broker an order to buy, say, 100 shares of U. S. Steel at 140 and 100 shares additional at each point decline until 500 shares have been bought, he is buying on scale. If the order were to sell 100 shares at 140 and 100 shares additional at each point up, then the trader would be selling on scale.

Buying Zone. Stocks are in the buying zone when their price level is far below normal. They are in the selling zone when unusually high. Before the recent great advances in stock prices it was thought by many that when the Dow-Jones averages were below 75, stocks were in the buying zone, and when the averages were above 100 to 105, they were in the selling zone. These figures must now be revised. Not enough time has elapsed since the 1924-1926 bull market to point any limits to buying or selling zones.

Call. A call is an agreement whereby the seller gives the buyer the right to call on him within a given period of time for a specified number of shares at a specified price. A call may be "at the market" or at a certain number of points above the market.

Call Loans. These are loans to brokers subject to termination at the will of either the borrower or lender.

Callable or Redeemable Stock. These terms usually apply to bonds or preferred stock. These securities may be called in and paid by the issuing company within stated time limits and at prices fixed at the time of issue.

Cats and Dogs. In general this phrase is applied to worthless stocks.

Chasing Eighths. Brokers who are willing to operate on a very narrow margin of profit. Scalpers.

Clearing-House Statement. A statement, published each Saturday, of the condition of the members of the New York Clearing-House Association of banks.

Collateral. Stocks and bonds pledged with a bank or other lender of funds as security for a loan. Collateral is commonly "mixed" or "all industrial."

Commercial Paper. This term applies to business men's paper, usually running four months to six months, issued through a commercial paper house.

Commission House. A brokerage house that sells its services to its customers on a commission basis.

Constructive Side of the Market. One who operates on the constructive side of the market buys stocks.

Contango Day. The first day of the settlement period on the London Stock Exchange. On this day those traders who do not wish to pay for stock have their broker manage to carry it for them. These brokers lend it to traders who have stock to deliver but do not wish to buy the stock and, therefore, borrow for delivery. It is the day on which all the carry-overs are arranged for. Those traders who do not wish to deliver arrange with their brokers to borrow and deliver.

Continuous Market. A market in which one can at any moment during the business day buy or sell securities listed on the exchange in question at the market price.

Convertible Bond or Stock. Bonds or stocks that may be converted to other bonds or stocks commonly at the option of the holder and usually to issues junior to those converted.

Copper a Tip. When one does the opposite from the action indicated by the tip.

Corner. When a trader or group of traders have bought all the available floating supply of stock and, in addition, have contracts for large amounts of stock to be delivered by short sellers, a corner can easily be forced by the holders of the contracts by calling on the shorts to deliver on their short sales. Since the people to whom the shorts must deliver hold all the available stock, they are obliged to pay any price asked. The Stock Exchange Rules do not allow a corner on the Exchange; if a corner occurs, the Exchange authorities take a hand and try to settle the affair at a reasonable price.

Crossing Orders. A broker who has an order to buy, say 100 shares of U. S. Steel at 140 and another order to sell 100 shares Steel at 140 cannot "cross" the two orders, that is, sell one customer's stock to another, until he has first offered the 100 shares of Steel at 140⅛. If no one can be found to pay 140⅛, he may sell to the customer bidding 140.

Cumulative Preferred Stock. Preferred stock whose dividends cumulate from year to year when not paid. The dividend in arrears must be paid before dividends are paid on common stock.

Curb Market. This term was for years applied to the brokers who met in the open in Broad Street, New York, and traded in securities. At present this market has moved into its own building and does a large business. It has its own listing requirements. Stocks often graduate from this market to the New York Exchange.

Customers' Room. The room in a brokerage house where customers congregate around the ticker and before the quotation board.

Cutting a Melon. The declaration of a large extra dividend is known by this phrase.

Day Clearing Branch. See "Stock Clearing Corporation."

Day Loans. See "Morning Loans."

Day Orders. Limited orders to buy or sell stock which expire at the close of the day's business.

Debenture Stock. A type of preferred stock not much used in this country but common in England.

Delivery by Certificate. See "Delivery by Transfer."

Delivery by Transfer. The buyer of stock on the New York Stock Exchange has the option of asking for delivery by certificate or by transfer except that when ownership involves financial obligation the seller may deliver by transfer, that is, he may have the stock transferred on the books of the company before delivery. Delivery by certificate is accomplished by simply delivering indorsed certificates.

Discounting. The market is said to discount, that is, advance or decline because of an event that is expected to happen in the future. A good earning statement at the end of the month is discounted by the market, that is, the price of the stock of the company goes up some days or weeks before the statement is made public.

Discretionary Order. An order given to a broker to buy or sell stocks according to his own best judgment. Brokers usually refuse discretionary orders.

Distribution. A pool accumulates the shares of a corporation and after carrying the stock up a number of points sells it out carefully so as not to break the market. This is distribution. The term applies to long-swing and short-swing operations; to operations by pools and individuals.

Double Bottoms. When the price of a stock or the average price of a group of stocks makes a rally after a decline and then declines again but holds at the previous low point, a double bottom is said to have been made. This is said to be a sign of strength in the demand for the stock or stocks under observation.

Double Liability. A stockholder is subject to double liability when he is liable to the creditors of his company for the par value of his stock in addition to the purchase price.

Double Tops. When a stock or group of stocks has had a reaction

after an advance and the reaction is followed by a second advance to the previous high but without going through it, a double top has been made. This is said to be a sign of lack of support at the top. The market may be expected to decline for some time.

Dow, Jones Averages. Dow, Jones and Company publish each day an average of the closing prices of 20 railroad stocks and a second average of the closing prices of 20 industrial stocks. These averages are published in the *Wall Street Journal* and in the leading financial pages throughout the country.

Dow Theory. This is the theory that the movements of the stock market forecast movements in business. The stock market is a barometer of business. Furthermore, the theory holds that the market at any moment is a composite of three movements and furnishes a method of forecasting the major and, in part, the minor swings of the market.

Due Bills. When a broker buys stock from another and there is no time for transfer of the stock before the transfer books close, the selling broker gives the buyer a written promise or order for the amount of dividend. This writing is called a "due bill."

Eighth Stocks. The odd-lot dealer charges an eighth of a point above the market and pays an eighth of a point less than the market for the more stable stocks. On others, he makes a difference of a quarter of a point. The former are called "eighth" and the latter "quarter" stocks.

Equity. The stockholder's interest in the assets of a corporation after all indebtedness has been provided for.

Ex-Clearing Corporation. Not all stocks clear through the Stock Clearing Corporation. Such stocks clear directly between brokerage houses as was the custom before clearing facilities were instituted.

Ex-Dividend. On the day on which a corporation's transfer books are closed for taking the list of stockholders entitled to receive the dividend about to be paid, or on the day set by the Stock Exchange authorities, stocks sell ex-dividend, that is, the new purchaser does not receive the dividend.

Ex-Rights. When new stock is sold to stockholders, from the date of the announcement of the sale of additional stock until the day on which the transfer books close for taking the list of stockholders who are eligible to receive warrants for the new stock, or some other date fixed by the authorities of the Stock Exchange, the old stock sells

"rights on"; but from the day the books are closed until the time when the rights to subscribe expire, the old stock sells "rights off," that is, ex-rights. On the day on which the stock sells ex-rights, the price of the stocks will be less than that of the preceding day by the value of a right, provided no other influences affect the price.

Extra Dividend. A special dividend paid regularly or at irregular intervals in addition to the regular dividend payments.

Federal Reserve Ratio. The ratio of gold and other lawful money held by the 12 Federal Reserve banks to the total of their deposits and Federal Reserve note issues. Each Federal Reserve bank also has its own reserve ratio computed in the same manner. This ratio is thought to be a good indicator of money conditions.

Firm. When the price of a stock or group of stocks or the market in general holds with a slight tendency to advance, it is said to be firm.

Flat. A term applied to the price of stock and of income bonds or bonds in default. The price as quoted includes all accrued dividends and interest, if any. The term "flat" is also used in connection with the lending of stock. When stock lends "flat," the lender does not pay interest to the borrower on the money deposited by the borrower; nor does the borrower pay a premium to the lender.

Floating Supply of Stock. The amount of stock of a corporation in the hands of brokers and traders ready to come upon the market at any moment. When investors buy stock and take it out of the market, the floating supply diminishes.

Floor Trader. A member of the New York Stock Exchange who trades on his own account on the floor of the Exchange. He is usually satisfied with small margins and depends upon volume of sales to multiply his profits.

Flurry. A sudden severe change in price of one or more stocks accompanied by excitement among traders participating.

Flyer. An operation that varies from semi-gambling to mere gambling. A stock is bought or sold on a chance that it will advance or decline and a quick turn with good profits can be made.

For a Turn. A purchase or sale with the expectation that in the course of a short time profits can be taken.

Founders' Shares. Promoters and organizers of corporations sometimes take as part pay for their services special stock in the company. Holders of these shares frequently receive dividends on the same basis

as common stockholders. This kind of stock is not often found in the United States but is common in England.

Fractional Lot. A block of less than 100 shares. See "Odd Lot."

Fully Paid Stock. A stock not legally subject to further assessments because the par value has been fully paid.

Funded Debt. The debt of a corporation represented by bonds and mortgages issued by the corporation.

Give Up. A broker on the floor of the Stock Exchange who transacts the business of another broker may "give up," that is, may make known his principal to the broker with whom he is dealing. The latter then settles with the broker whose name is given up. This custom makes it possible for any one who has an account in good standing with any member of the Stock Exchange to go to any office or correspondent of any other member, announce the name of his regular broker, and have his order executed the same as if he were at the office at which his account is carried. The broker who receives the order sends it to the floor of the Exchange, where the order is executed and the name of the customer's regular broker "given up" to the member with whom the transaction was carried on.

Good Delivery. When stock is listed, properly indorsed, and in 100-share lots or multiple thereof, it is "good delivery."

G.T.C. A limited order to buy or sell that does not expire until executed or until countermanded.

G.T.M. A limited order to buy or sell that is good until executed but expires at the end of the current month.

G.T.W. An order to buy or sell that is good until executed or throughout the current week.

Guaranteed Stock. When the payment of the dividends on the stock of a company are guaranteed by another company, the stock is said to be guaranteed stock. This often happens when one company leases the property of another.

Gunning for Stops. When a trader or group of traders suspect many stops just beneath the market and sell the stock or stocks supposed to be in a weak position, causing the price to drop to the point where the stops are caught, such an operation is known by the phrase "gunning for stops." When the stops are caught, the selling may cause a break in the market to the profit of the traders.

Hard Spots. The market is often weak or sags, but certain stocks remain firm. These are hard spots in the general situation.

Hooked. A trader is said to be "hooked" when he has bought stock for an advance but is forced to carry his stock across a long period of decline or take a loss.

Hurry-Hurry Game. Cheap stocks are offered at a low price for a limited time only.

Hypothecation. The pledging of securities as collateral for loans at a bank or with a money broker.

Immediate Orders. Limited orders which the broker must execute at once if the market price at the moment permits execution. If the market price is different from the price set in the immediate order, then the broker must report the situation in the market and the trader can adjust his price accordingly.

Insiders. Interests supposed to have inside information as to what is happening or going to happen in the affairs of a corporation. They are thought to take advantage of this special knowledge by trading on the market.

Irish Dividend. When stockholders are called upon to pay an assessment to the corporation, the assessment is known as an "Irish dividend."

Issued Stock. Stock that has been issued by the corporation to stockholders. It is frequently less than the amount authorized.

Joint Stock Company. This type of organization issues shares of stock which are transferable from holder to holder the same as the shares of a corporate organization but carry unlimited liability as is the case of each partner in a partnership.

Lambs. The public that buys the stock when traders and investors are selling out their holdings.

Leaders. Stocks that lead the market in an advance or a decline. The stocks of General Motors and United States Steel were the leaders of the market during the summer of 1926. The leaders in an advance are usually the stocks of strong corporations well sponsored by powerful financial interests.

Limited Order. An order to buy or sell at a stated price. For example, "Buy for my account and risk 100 shares of United States Steel at 140."

Line. The industrials are making a "line" when the industrial stock price averages do not vary much from day to day for some time. The rails and the market, as a whole, may make a "line" as well as the industrials. A "line" is also known as a "sidewise" movement.

Listed Stocks. These stocks are listed for trading on some stock exchange. Unlisted stocks are not so listed but are sold at auction, over-the-counter, by brokerage houses to customers, or from stockholder to stockholder direct. Some stock exchanges have unlisted departments.

Liquidation. Traders long of stock are selling out their long stock. Liquidation may be forced or voluntary.

Loan Crowd. Every morning and again in the afternoon on business days, members of the Stock Exchange who have stocks to lend and those who want to borrow gather at a certain post on the floor of the Exchange to borrow and lend stocks. These borrowers and lenders constitute the "loan crowd."

Long of Stock. A trader who has purchased shares and holds them expecting an advance in price is "long of stock." The "longs" are those holding stocks.

Long Side. An operator on the "long side" of the market is buying stocks and holding for an advance; an operator on the "short side" is selling stock, hoping for a decline.

Major Swings. The fluctuations of the market covering from a year to several years.

Making a Market. Persons interested in a corporation hire a broker or stock trader to keep the stock of the corporation active and advancing in the market and to build up a following so that many shares can be bought without raising the price unduly or many shares can be sold without breaking it. Such a proceeding is known as "making a market."

Management Stock. This is a type of stock which confers upon its holders, usually a small group, the right to control the management of the corporation.

Manipulation. A planned creation of an artificial price on either the long or short side of the market.

Margin. The term "margin" refers to the amount of money deposited with his broker by a purchaser or seller of stock to guarantee the broker against loss by reason of changes in the price of the stock.

Market Gone Stale. The market has "gone stale" when no definite trend appears and activity largely ceases in the leaders.

Market order. An order to a broker to buy or sell, as the case may be, at the market price.

Market's Internal Position. See "Technical Position."

Matched Orders. When a trader gives one broker orders to buy a given stock and another orders to sell a like amount of stock in a manner to either advance or to depress the price artificially, such a trader is said to be giving "matched orders."

Merger. Two or more corporations unite into one company. An entirely new company may be the result, the old stock of the merged concerns being called in and new stock of the new company issued to all the stockholders. On the other hand, the stock of the concerns only which are merged with a parent company may be called in. The parent company then issues its own stock to replace the stock of the merged companies.

Minor Swings. The fluctuations of the market lasting from a week to several months. They may be due to seasonal variations or temporary reactions or rallies in business or to the technical situation in the market.

Money Broker. A middleman who lends the funds of banks, corporations, or individuals to borrowers. In the case of the New York Stock Exchange he operates outside of the Exchange often at a rate below that current at the money desk.

Money Desk. The desk on the floor of the Stock Exchange where lenders report supplies of funds for call loans and borrowers report their needs.

Money Market. This is a general term and includes all those who have funds to loan and those who are in the market on the borrowing side. There is no definite place occupied by the money market like, for example, the Stock Exchange for stocks or the Board of Trade in Chicago for grain.

Morning Loans. Unsecured loans made by brokers at their banks in the morning to pay balances or to pay old loans called by the bank or unsatisfactory to the broker.

News Ticker. An instrument found in brokerage offices which prints on paper ribbons several inches wide items of news sent over the wires from the news-gathering agency in New York.

Night Clearing Branch. See "Stock Clearing Corporation."

Non-Assessable Stock. Stock of this type is fully paid and cannot be assessed for any further payments except as agreed to at a meeting of the stockholders.

Non-Cumulative Preferred Stock. A preferred stock whose dividends do not accumulate when not paid.

Non-Voting Stock. Stock without the privilege of voting at stockholders' meetings. This type of stock has been issued in recent notable cases in which a relatively few shares carry control and large amounts of stock have no voting privilege.

No-Par Stock. Shares of stock issued with no designated par or nominal value.

Odd-Lot. Less than 100 shares. The full lot on the New York Stock Exchange is 100 shares.

Odd Lot Dealer. A member of the New York Exchange who buys odd lots of stock from commission brokers and sells odd lots to them. On the Exchange, he buys and sells in full lots to even up his commitments.

On a Scale Up or On a Scale Down. See "Buying on Scale."

Opened Up. The market opened at a higher level than the previous day's close.

Opened Down. The opening of the market was on a lower level than the previous day's closing price.

Open Order. A limited order with no set time for its expiration.

Options. See "Buyers' Options" and "Sellers' Options." Frequently the term "options" is used instead of the more accurate term "privileges."

Outside Money Market. Much money is loaned to brokers outside the Stock Exchange by money brokers. This is the outside money market.

Over-the-Counter. Securities sold by brokerage or bond houses direct to customers are sold "over-the-counter."

Overbought Market. A market in which traders have bought larger amounts of stock than they can readily carry. An overbought market is a technically weak market.

Overcapitalization. A concern is commonly said to be overcapitalized when the par value of its stock outstanding is greater than the value of the assets behind the stock. Some writers would say that overcapitalization exists when the total par value of the stock outstanding is materially greater than the value of the assets and the probable earning power behind the stock. There may not be much difference between the two statements.

Overstay the Market. Traders and investors are liable to wait too long before buying or delay until the market has declined many points before selling. They overstay the market.

Paid-up Stock. Stock that was paid at par at the time of issue. No assessments can legally be made against it.

Par Value. The nominal value. The par value of most railroad stocks is $100. The nominal or face value of industrial securities may vary from stocks without par value to shares with $100 face value. Many oil stocks have a par value of $25 or less. Several of the copper stocks have a face value of $5. The market value may be above par value or below it.

Participating Preferred Stock. A preferred stock that shares in the prosperity of the company with the common stock. When net earnings are large, participating preferred gets its regular dividend. After the common stock receives a specified return, the participating preferred shares with the common stock in the division of the remainder of the earnings, commonly at a stated ratio.

Passed Dividend. When the board of directors fail to provide for a regular quarterly or a semiannual dividend payment, the dividend is said to have been "passed."

Pegging the Market. The price of a stock is maintained at or near the same figure by its sponsors. If the price of the stock of the Standard Oil of New Jersey were maintained at 43 by a group of bankers who buy the stock when the price goes below 43 and sell it when the price goes above, the market on Standard of New Jersey would be said to be "pegged."

Piker. One who trades in very small lots and is always ready with complaints.

Pivotal Issues. The leaders in the market upon which the traders in other stocks depend for their cues to buy or sell.

Point. A "point" in reference to stock prices commonly means $1 per share.

Points Away. Privileges may be bought on the basis of "points away" from the market or "at the market." If they are bought at, say, three points above or below the market, then they cannot be profitably used unless the market rises or falls more than three points within the life of the privilege.

Pool. See "Bull Pools," "Bear Pools," "Blind Pools," "Bob-tailed Pools," and "Sucker Pools." When two or more persons under an

agreement contribute, each, a stipulated sum of money which is to be used in buying and selling stocks in such manner as to create an artificial price at which the group expects to reap satisfactory profits, such a group is said to have formed a pool, and their operations are pool operations.

Preference Stock. Usually called preferred stock in the United States. Preference stock is the common designation in England.

Premium. When stock sells above its par value, it is said to sell at a premium.

Premium Stock. A stock is a "premium" stock when the borrower pays a premium to the lender for the loan of the stock. This may happen when the stock is heavily sold short and not much stock is available for borrowing.

Principal. A broker's customer is his principal. See "Give Up."

Privileged Subscription. Corporations at times give their stockholders the right to subscribe to additional stock at a price lower than the market price. Such rights to subscribe are called "privileged subscriptions" or "rights."

Privileges. Privileges are contracts sold by a maker which gives the buyer the right, under specified conditions, to call upon the maker for delivery of stock, or to deliver stock to him. See "Calls," "Puts," "Spreads," "Straddles," and "Points Away."

Prior Preference Stock. Prior preference stock is usually stock that is senior to all other stock issues of the corporation.

Professionals. Professional traders who usually trade on the small fluctuations and short swings of the market. The term is often used to mean the bear crowd.

Promoters' Stock. Stock given to the promoters of a corporation as part or full payment for promotion work.

Proprietorship Accounts. The accounts represented by the common stock, preferred stock, and surplus items on the liability side of the balance sheet.

Proxy. A stockholder may authorize some other person to vote in his stead at a stockholders' meeting. The person authorized to vote is called a "proxy"; the written instrument conferring authority is also called a "proxy," and the conferred authority is a "proxy."

Public. The great mass of the people who buy or sell stocks occasionally. The public is said to be always wrong.

Put. A contract whereby the maker agrees to receive from the purchaser a stated number of shares at a specified price at the option of the purchaser within a certain time limit.

Pyramid. An account with a broker built up by using paper profits as full or part fulfilment of margin requirements for the purchase of additional stock until a large account has been built up. A pyramid may be built on either the long or short side of the market and depends on a large advance or decline in the price of the stock pyramided.

Rally. A quick advance after a decline.

Reaction. A rapid decline after an advance.

Rediscount Rate. The minimum rate at which a Federal Reserve bank will discount the eligible commercial paper of a member bank of the Federal Reserve system.

Regular Way. Delivery of stock "regular way" means that delivery on a purchase shall be made the next full business day before 2:15 p. m.

Renewal Rate. This is the rate posted each morning at the money desk on the floor of the Stock Exchange applying to call loans held over from a previous day. This rate remains fixed for the day though the market rate fluctuates from moment to moment.

Reorganization. An adjustment of the financial structure of an insolvent concern so as to reduce fixed charges to the point where the earnings of the business will be adequate to meet the fixed requirements and allow the business to continue operation.

Resistance Levels or Points. The points in the price of a stock at which the price meets so much selling pressure that it cannot go higher or so much buying support that it cannot go lower.

Rigged. The market is said to be rigged when it is artificially prepared for some event.

Rights. See "Privileged Subscriptions."

Run-in the Shorts. The bulls force the shorts, by advancing the price, to buy stocks to cover their short sales.

Running to Cover. The shorts hurry to buy stock to cover their short commitments.

Scalper. A trader who trades on very narrow margins of profit.

Scrip. Dividends are sometimes paid in scrip or what amounts to the

company's note convertible into stock or payable at a later date in cash. Scrip has no voting power but may pay interest.

Seasoned Stocks. Stocks of well-established companies that have paid dividends regularly for many years.

Seat. A membership on the New York Stock Exchange.

Secular Trend. The trend of growth of an industry over a long period of years.

Selective Market. A discriminative market. A market in which only the most promising stocks are bought and others are passed by.

Seller's Option. A contract lasting from 4 days to 60 days whereby a seller has the right to deliver stocks to the buyer at a specified price at any time during the life of the option. See "Buyer's Option."

Selling on Scale. See "Buying on Scale."

Selling Short. When a trader sells stock which he does not own but expects to acquire in the future, he is said to sell short. The transaction is called a short sale.

Selling Zone. See "Buying Zone."

Sells Off. The market is selling off when it declines.

Settlement. In the New York Stock Exchange settlement of all transactions are made daily; in London, twice each month.

Short Account. A short account is an account of a customer with his broker which shows that the customer has sold short heavily. The term short account may also refer to the total of short selling in the market.

Short Lines. A trader puts out short lines when he sells short.

Short of Stock. A trader is short of stock after he has sold short.

Short Side. The selling of the market.

Sidewise Movement. See "Line."

Sinking Fund. A fund built up by setting aside reguarly a certain sum of money which will eventually take care of the relative bonds or preferred stocks when due or called. The fund may be used to buy in the securities under specified conditions in many instances.

Slump. A sizable unexpected drop of prices.

Soft Spots. When there are weak stocks in a market that is otherwise firm, the market has soft spots.

Specialists. Specialists are members of the New York Stock Exchange who specialize in a few stocks located at the same post on the floor of the Exchange. They transact business for their own account as dealers and for others as brokers on a commission basis. They are an important factor in maintaining a continuous market in their particular stocks.

Specvestments. A term sometimes applied to stocks that are reasonably sound with attractive speculative features.

Spilling Stock. When stock is thrown on the market in large amounts, the operation is known as "spilling stock."

Split Opening. At the opening of the market when two or more sales are made at the same moment but at different prices, the opening is said to be a "split opening."

Split Order. An order directing a broker to buy part at one time and part at another, or part at one price and part at another.

Split Quotation. A quotation whose spread between bid and asked price is less than an eighth of a point.

Split-Up. A stock split-up refers to the current practice of splitting shares of stock with a relatively high price into several shares.

Spread. The margin between bid and asked prices. The term is also applied to a form of privilege which combines a put and call issued on the basis of "points away" from the market. A spread is similar to a straddle except that a straddle is issued "at the market." See "Call," "Put," and "Points Away."

Squeeze. Bears are squeezed when they are forced to buy stocks for cover at a relatively high price because the stock available for loaning is scarce.

Stamped Stocks. A new provision not included in the original certificate has been stamped on the stock certificates.

Stock Clearing Corporation. A corporation under the control of the New York Stock Exchange which undertakes to clear accepted stocks each day, settle payments on balances of stock to deliver, clear loans of funds, and attend to transfers of stocks within certain limits. The organization of the Corporation consists of a Night Branch and a Day Branch. The Night Branch attends to the clearing of the stock and the Day Branch the settlement of money balances. For more complete description, see Chapter VIII.

Stock Dividends. A distribution of additional stock of a corporation to its stockholders at a fixed ratio to the stock outstanding.

Stock List. The list of stocks that has met the requirements of the Stock Exchange for admission to trading as listed stocks.

Stock Price Averages. A number of attempts have been made to produce an index number of stock prices. Such index numbers have commonly taken the form of averages of stock prices, for example, the Dow, Jones, *New York Times,* and *New York Herald-Tribune* Averages. The Standard Statistics Company and Professor Irving Fisher publish index numbers of stock prices.

Stock Registrar. Every corporation whose stock is listed on the New York Stock Exchange must have a registrar in the Wall Street district for the purpose of registering all new certificates of stock issued. This requirement is a safeguard against fraudulent or overissue of stock.

Stock Transfer Book. Each corporation keeps a stock transfer book in which is kept the record of the transfer of stock from one stockholder to another.

Stop-Loss Order or Stop Order. A stop-loss order is used by traders to limit losses and protect profits. A stop order to sell is put at a fixed price below the market, and if the market price declines to the named price, the stock is sold. A stop order to buy is put at a fixed price above the market. If the market price rises, the stop is caught and the stock bought in.

Stopping Stock. Two members on the floor of the Exchange agree upon a price at which one will sell and the other buy. They further agree that if the market meets this price the deal is considered closed. The agreed price may be that of the next sale or some fixed figure. No record of stopped stocks reaches the ticker tape.

Straddle. A form of privilege which combines a put and call and is similar to a spread except that the straddle is on an "at the market" basis while a spread is on a "points away" basis.

Strong Hands. Stock is transferred from weak hands to strong hands when the public sells to insiders or to large financial groups who are accumulating the stock.

Subscribed Capital. All the authorized capital stock or only a part may be subscribed for. Such part of the authorized capital stock as is subscribed for must be paid at the agreed price.

Sucker List. A list of names of persons who may be easily persuaded to buy worthless securities. The names on a real estate sucker list or a patent medicine sucker list will also do very well for a security sucker list.

Sucker Pool. A pool which has admitted a lot of small brokers and traders hoping to sell out to them.

Support. The support is of a "good character" when strong interests are buying; is "lacking" when no one buys.

Switching. A trader switches out of one stock and into another as he thinks one gives more promise of profits than the other.

Syndicate. A group of bankers which underwrites a new issue of stock or bonds and undertakes to sell the issue to the public.

Taking a Position. A trader takes a position in the market when he confines his trading to one side of the market, for instance, the long side or the short side.

Taking Profits. A bull takes profits by selling after an advance in price; a bear, by buying after a decline.

Tape. A narrow ribbon of paper upon which stock quotations are printed by a ticker.

Tape Reader. One who interprets the market from the facts he sees on the tape and manages his trading accordingly. He must keep close watch of the tape or he may miss important indications.

Technical Position. This term refers to inside structure of the market. If the market is oversold, its inner structure is strong. If the market is overbought, it is weak.

They. A term that refers to insiders and large operators who are imagined to be operating in the market, causing it to advance or to decline more or less at will.

Ticker. An instrument found in brokers' offices in many cities which records stock quotations on the "tape" by means of symbols. Only on extremely active days does the ticker fall far behind in printing the price as soon as a transaction is made.

Ticket Day. The second day of the settlement period on the London Stock Exchange. On the first day those who do not want to receive or make delivery of stock arrange with their broker to carry it over until the next settlement date. On the second day of the period those who wish to make or receive delivery make out tickets designating the amount of stock they wish to deliver or receive and deposit them with the clearing-house where they are cleared.

Tip. Supposed advanced information.

Top-heavy Market. A market that is overbought.

Trading on Scale. See "Buying on Scale."

Trading on a Shoestring. Trading with little in the way of resources.

Treasury Stock. Stock acquired from holders by gift or purchase and held in the treasury of the corporation which issued it originally.

Two-Dollar Broker. A member of the New York Stock Exchange who executes orders for other members on the floor at a small commission. This commission was formerly $2; hence the name.

Uncover Stops. When stop-loss orders have been placed under the market, traders selling may cause a decline in price which brings the stops into execution, that is, the stops are uncovered.

Under the Rule. In case a firm is insolvent and cannot fulfil its contracts the *Rules Adopted by the Governing Committee* (Chapter IV) prescribe the methods of closing the contracts. Such contracts are said to be closed "under the rule."

Undigested Stocks. Stocks which have not yet found more or less permanent owners. They are still largely on the shelves of members of the underwriting and selling syndicate or in the hands of people who, for one reason or another, cannot carry them.

Unissued Stock. Stock which has been authorized but never issued.

Unloading. Individuals or pools that have been carrying large amounts of stock are said to be unloading when they sell them on the market.

Upset Price. The upset price is the lowest price at which the property of an insolvent corporation may be sold. This minimum price is fixed by the court.

Voting Stock. A class of stock which gives its holders the sole right to vote on questions which particularly affect the stock.

Voting Trust. For purposes of centralized control the stockholders of one or more corporations are sometimes asked to deposit their stock with a board of trustees and thereby to give up all their rights of voting. In return for the deposit of the stock certificates the trustees issue to stockholders voting trust certificates. Dividends are paid to the trustees, who pay them out to holders of the voting trust certificates.

Warrants. This term has a variety of meanings. As here used it refers to the certificates issued to stockholders granting them the right to subscribe to new stock of the company. These certificates can be bought and sold on the New York Stock Exchange when admitted.

Warrants may also be attached to bonds and give the owner the right to buy stocks under stated conditions.

Wash Sales. Two or more brokers agree among themselves to create an artificial price for some particular stock by means of buying and selling transactions. These transactions are purely fictitious, the seller never expecting to hold the buyer for payment, nor the buyer expecting to receive any stock. This type of transaction is no longer allowed on the floor of the best exchanges.

Watered Stock. See "Overcapitalization."

Weak Hands. See "Strong Hands."

Welsher. One who gets his broker to trust him and then lets him take a loss.

When, As, and If Issued. When it is rumored that new stock is to be issued by a corporation, brokers on the Curb Market begin to trade in it on a "when, as, and if issued" basis. If the rumor should be false, the contracts are void; if true, then the shares sold will be delivered when issued.

When Issued. Securities may be dealt in on a "when issued" basis, when admitted to the Stock Exchange by the Committee on Stock List. Delivery shall be made after the stocks are issued, on a day set by the Committee on Securities.

Wild Cat Stocks. See "Cats and Dogs."

Yield. In the case of stocks, the yield is found by dividing the number of dollars paid per share as dividend by the cost per share and multiplying by 100. The result is the percentage yield on the cost of the stock.

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